DOCUMENT RESUME

ED 183 116 HE 012 375

AUTHOR Patterson, Lewis D.
TITLE Survival Through Interdependence. AAHE-ERIC/Higher Education Research Report No. 10, 1979.
INSTITUTION American Association for Higher Education, Washington, D.C.: ERIC Clearinghouse on Higher Education, Washington, D.C.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE 79
CONTRACT 400-77-0073
NOTE 64p.
AVAILABLE FROM Publications Department, American Association for Higher Education, Suite 780, One Dupont Circle, Washington, DC 20036 ($4.00: AAHE members $3.00)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Case Studies: Centralization: College Cooperation: *Consortia: *Cooperative Planning: Cost Effectiveness: Costs: Educational Benefits: Educational Objectives: Efficiency: *Higher Education: *Interinstitutional Cooperation: Organizational Effectiveness: Retrenchment
IDENTIFIERS *Institutional Survival

ABSTRACT

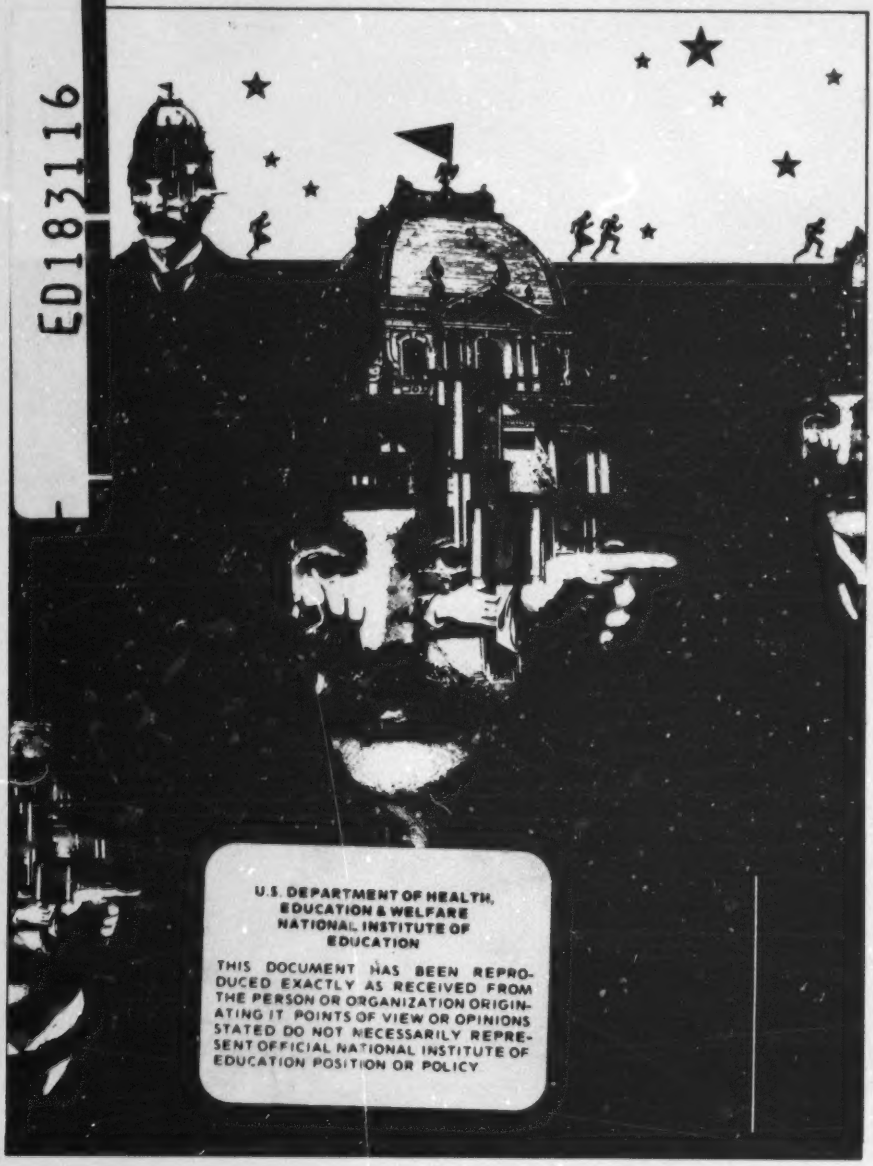
The predicted declines in higher education enrollment coupled with continuing increases in costs have caused administrators to rethink the tradeoffs resulting from interinstitutional cooperation and competition. In considering alternate courses, five basic questions are addressed: (1) To what extent do institutions nationally engage in cooperative relationships?, (2) What should be considered in analyzing external relationships?, (3) What are the costs and benefits of cooperation?, (4) Are there significant educational benefits beyond cost advantages?, and (5) What role will cooperation play in the future? It is shown that increases in cooperative arrangements is part of a much larger movement to ever-increasing levels of centralization and interdependence, but that objectives, longevity, and manageability must be balanced against administrative style, institutional size and resources, and the accruing costs and benefits. The underdeveloped state of methodology for quantifying costs and benefits makes precise answers to one of the most crucial questions difficult, and few examples are yet available. However, some nonquantifiable benefits have been identified: duplication avoidance, quality instruction, instructional diversity, increased access, additional funding sources, increased communication, alternative approaches, increased efficiency, greater planning and control, and leadership structures. It is concluded that an irreversible trend has begun. Appendices provide listings of major contributors to the Council for Interinstitutional Leadership-Carnegie Corporation study of cooperative cost effectiveness, and of the 25 consortia and their member institutions that had one or more programs included as case studies in the analyses. A bibliography is also included. (MSE)

10
REPORT

Survival Through Interdependence

Lewis D. Patterson

ED183116



U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

IIE 012 375

ERIC/AAHE 1979
4.00

Survival Through Interdependence: Assessing the Cost and Benefits of Interinstitutional Cooperation

Lewis D. Patterson

AAHE-ERIC/Higher Education
Research Report No. 10, 1979

Prepared by the
ERIC® Clearinghouse on Higher Education
The George Washington University
Washington, D.C. 20036

Published by
the American Association for Higher Education
One Dupont Circle, Suite 780
Washington, D.C. 20036

This publication was prepared with funding from the National Institute of Education, U.S. Department of Health, Education, and Welfare under contract no. 400-77-0073. The opinions expressed in this report do not necessarily reflect the positions or policies of NIE or HEW.

Acknowledgements

The author wishes to acknowledge the courage of Jonathan D. Fife, director of the ERIC Clearinghouse on Higher Education, and his national advisory board for commissioning a review of a controversial but significant phenomenon in higher education: increasing interdependencies for all types of colleges and universities.

A special note of thanks is extended to Russell Edgerton, Executive Director of the American Association for Higher Education, who suggested that the topic be approached within a framework of four or five pragmatic questions about cooperation which, when answered, would have functional value for administrators.

Last, this work was aided immeasurably by a rich background of experiences acquired from directing a study of *Costing Collegiate Cooperation*, 1977-79 (1979) sponsored by the Council for Interinstitutional Leadership (CIL) and supported by the Carnegie Corporation of New York. The major contributors to that project who analyzed the cost effectiveness of 38 separate cooperative programs located at 25 consortia, and the corsortium and institutional personnel in the field who opened their programs to external review[1] deserve recognition for their efforts to construct new alternatives for the future of higher education.

[1]See Appendices A and B for listings of: (1) major contributors to the CIL-Carnegie study of cooperative cost effectiveness; and (2) the 25 consortia and their member institutions that had one or more programs included as case studies in the analyses.

Preface

In 1966 when my work in interinstitutional administration first began, the three major purposes of consortia were to offer new educational opportunities, to strengthen the quality of existing programs, and, when possible, to gain economic benefits. In the last several years, effectiveness and cost avoidance have gained in importance.

When the topic "Assessing the Costs and Benefits of Linkages, Networks, and Interinstitutional Arrangements" was proposed to The ERIC Clearinghouse on Higher Education, it was hoped that the study could focus to a large degree on the financial aspects of multi-institutional relationships. Subsequent investigation, however, including an extensive review of the literature, numerous interviews with coordinators of national cooperative projects, and on-site consortium visits inevitably led to the conclusion that assessments of institutional relationships would have to include in their scope more than just finances.

The educational benefits, though not easily identified and quantified, and political motivation continue to be important considerations in cooperation. Too, most institutions do not know in quantitative terms what the costs are to sustain the relationships or what the derived values and benefits are. Nevertheless, funding sources will continue to press cooperative solicitors to demonstrate economic advantages as a primary condition of support.

Lewis D. Patterson
November 1979

Foreword

The idea of individuals joining together to pursue a common goal while maintaining their own identity is hardly a new concept. Early societies were motivated to do this by a basic instinct for survival. Grouping together for mutual defense, the joint production of food, and specialization of tasks are all early examples of cooperative efforts that were necessary to develop a stable and growing civilization. While interdependence under an autocratic leadership may have stifled individual freedom, in a democracy it was instrumental in promoting further development by allowing individuals to concentrate on activities that they could do best.

Institutional cooperation in American higher education is also not a new concept. There was a modest form of interinstitutional cooperation between the early colleges founded by the same denomination. In the mid and late nineteenth century the development of co-ordinate colleges—men's and women's colleges, such as Harvard and Radcliffe, Columbia and Barnard, Mary Washington and the University of Virginia—was a form of institutional cooperation that was the beginning of coeducation and further strengthened the American higher education system. There were times when institutions in close proximity found it to their advantage to share academic programs. An example of this is the Amherst, Smith, Mount Holyoke, and University of Massachusetts agreement, where students from each institution could take courses at the other institutions without additional cost.

Today higher education is entering a new era full of conflicts and uncertainties. First and foremost is that of declining student demand. Facing a potential 20-percent decrease in the number of students graduating from high school, many institutions may find themselves without sufficient numbers of students, and therefore, income to survive. Inflation, spiraling energy costs, aging facilities, and increased expenses caused by new federal demands also are contributing to institutional financial problems.

One solution to these threats against institutional survival is the strengthening of academic programs and conserving of resources through sharing with other institutions. But with sharing comes interdependence and with interdependence comes a threat to an institution's identity and ability to control one's destiny. It is this fear of loss of identity and control that has prevented many institutions from

entering into cooperative agreements. Many institutions fail to examine the question, Do the benefits outweight the cost? before they react.

Until recently there has been very little data concerning the costs or benefits of interinstitution cooperations. The founding of the Council for Interinstitutional Leadership (CIL) and its recent study *Costing Collegiate Cooperation* (1979) has helped to remedy this situation. In this Research Report, written by Lewis D. Patterson, Executive Director of CIL, various forms of interinstitution cooperation are reviewed, their purposes examined, and the cost benefits analyzed. Based on this comprehensive review of interinstitutional cooperation, administrators and faculty members will be better able to examine their own situation and evaluate whether sharing of resources will contribute to future survival.

Jonathan D. Fife, Director
ERIC® Clearinghouse on Higher Education

Contents

Overview 1

To What Extent Do Institutions Engage in Interinstitutional Relationships? 4
Terminology 4
Indicators of Relationships 4

What Should Be Considered in Analyzing External Relationships? 13
Managing by Objectives 13
Numbers Versus Control 13
Special Purpose Versus General Purpose Consortia 14
Point of Diminishing Returns 15

What Are the Costs and Benefits of Cooperation? 16
Evaluation Criteria 17
Cost Analysis Literature and Methodology 18
Cost Effectiveness Findings 22

Are There Significant Cooperative Educational Benefits Beyond the Cost Advantages? 31
Duplication 31
Quality 31
Diversity 31
Access 32
Financial Advancement 32
Communication 32
Alternative Systems 32
Competition 33
Planning and Control 33
Efficiency 33
Leadership 34

What Role Will Cooperation Play in the Future? 35

Alternative Courses of Action 35
Universality of Interdependence 35
Pragmatic Issue-Related Questions 36
Obstacles to Cooperation 36

Appendix A — Major Contributing Authors to the CIL-Carnegie Study of the Cost-Effectiveness of Cooperative Programs 38

Appendix B — Listing of Consortia and Their Member Institutions That Participated in the CIL-Carnegie Study of Cost-Effective Cooperative Programs 39

Appendix C — Annotated Bibliography 42

Bibliography 48

Overview

The first human beings either instinctively knew or quickly learned that cooperation yields a variety of benefits ranging from the emotional to the material. At the same time, instinct or experience pushed our predecessors to compete, with the tendency paradoxically to become more competitive as resources decreased. For institutions of higher education, the tension between competition and cooperation merely extends basic aspects of human nature.

The predicted declines in student enrollments coupled with continuing increases in costs have caused administrators to rethink the tradeoffs resulting from cooperation and competition. In considering alternative courses, a review of five basic questions may be helpful: (1) To what extent do institutions nationally engage in cooperative relationships? (2) What should be considered when analyzing external relationships? (3) What are the costs and benefits of cooperation? (4) Are there significant educational benefits beyond cost advantages? (5) What role will cooperation play in the future?

1) To what extent do institutions nationally engage in cooperative relationships? Responses vary according to the definitions given to cooperative relationships; they include institutional participation in alliances, associations, clearinghouses, commissions, consortia, linkages, systems, and task forces. One survey made by the American Association of Community and Junior Colleges reported an average of approximately 100 cooperative arrangements per institution. More important than the figures is the fact that the continued increase in cooperative arrangements is part of a much larger movement to ever-increasing levels of centralization and interdependence, a movement that shows increased statewide coordination and governance, 1202 Commissions, Education Information Centers, and Education Opportunity Centers, not to mention the establishment of a Department of Education at the national level. Particularly phenomenal growth can be seen in interlibrary cooperation, where the founding of academic library consortia has grown from two between 1931 and 1940 to 99 between 1966 and 1971. A 1978 national inventory of library cooperation identified over 750 single-type, multitype, and interstate cooperatives and networks.

2) What should be considered in analyzing external relationships? Administrators first will want to identify and document existing re-

lationships. They must also consider that their institution participates in arrangements (e.g., statutory systems and accreditation commissions) where there really is no choice regardless of costs or benefits. Purposes to be achieved, durability of arrangement, and manageability must all be balanced against administrative style, institutional size and resources, and the accruing costs and benefits.

3) What are the costs and benefits of cooperation? The underdeveloped state of the methodology for quantifying the costs and benefits of institutional cooperation makes one of the most crucial questions one of the most difficult to answer in precise figures. It is evident that the only methods available to consortium directors for determining the cost effectiveness of their programs must be simple ones that rely on the use of whatever historical data are available at the member institutions and in the financial records of their cooperative programs.

Using the methods developed by Thomas O'Connor James, the Council for Interinstitutional Leadership directed an investigation between 1977-79 of six cooperative program areas. Stated simply the findings are: cooperation is and can be cost effective. The following are examples of representative savings in each area over a one-year period, identified by the cooperative program area, the name of the consortium, and the dollar savings:

1) Cross-registration: Atlanta University Center; derived value of instruction, $1,518,000.

2) Library and media cooperation: Union of Independent Colleges of Art; joint film center, $124,460.

3) Cooperative student services: Graduate Theological Union; common registrar's office, $85,214.

4) Group purchasing: Council of West Suburban College; cooperative employees insurance program, $92,000.

5) Cooperative nontraditional structures and distance-learning systems: York County Community College Services; outreach community college program; cost of instructional savings, $338,396.

6) Cooperative academic program: Greensboro Regional Consortium; consortium summer school, $80,000.

4) Are there significant educational benefits beyond cost advantages? The CIL evaluation teams, in visiting consortia across the country, were able to identify a number of nonquantifiable benefits from cooperation. Duplication avoidance, quality instruction, instructional diversity, increased access, additional funding sources, increased communication, alternative approaches, increased efficiency, greater planning and control, and leadership structures are but some of the sig-

nificant benefits accruing to institutions involved in cooperative arrangements. No one would apologize for being unable to quantify their value. In fact there are those who say that true values are those that defy quantification.

5) What role will cooperation play in the future? Of the four courses of action — survive alone, develop voluntary interinstitutional relationships, accept publicly-mandated systems of coordination, and terminate operations — available to institutions of higher education until 1995, many administrators would favor the order in which the options have been presented. In reality, institutions likely will accept a measure of each. The universal movement to increased levels of interdependence, however, cannot exclude institutions of higher education. The world issues resolving around currency, energy, environment, water, food, waste, population, transportation, communication, and new technologies show an irreversible trend. The challenge to educators is to cultivate forms of interinstitutional cooperation and coordination that enhance efficiency and enrich quality but that retain humaneness and responsiveness to the citizenry at the community levels.

To What Extent Do Institutions Engage In Interinstitutional Relationships?

Terminology

To grapple with the above question, the full range of relationships external to the institution should be considered: formal and informal; single and general purpose; voluntary and statutory; and local, regional, statewide, national, and international.

Adding to the uncertainty about external relationships is a variety of terms that frequently are used in higher education without common meaning: alliances, associations, clearinghouses, commissions, consortia, linkages, networks, systems, and task groups.

Because of the varying uses of the different descriptors, no useful purpose is served at this point by imposing strict definitions on the terms or by constructing detailed classification systems. Instead, it is suggested that an institution inventory all significant external involvements and that distinctions be made on the basis of serving the needs of the institution.

For functional purposes, "interinstitutional" should be defined broadly to include not only affiliations with colleges and universities but contractual and working relationships with corporations and other entities. An institution also may want to take into account professional organizations of individuals in those cases where the institution provides financial support for membership or participation in the organization.

Indicators of Relationships

Approximation of Numbers of Linkages: The landscape of American higher education has become so permeated with linkage systems that it is difficult even to estimate with any precision the number that might now be in existence. The opening sentence of *Cooperation Within American Education* (Wayne Anderson 1964) began: "Although there may be as many cooperative arrangements in American higher education as there are Americans, this report will attempt to isolate various examples. . . ." He proceeded to describe 83 cooperatives. Interrelationships of professionals, of institutions, and of groupings of institutions have spawned in numbers beyond imagination in the past 10 to 15 years: in the administrative field; in the academy, disciplines, and

in research; and in student and community services. In most of these arenas of activity, hard data on the current status are rather limited.

A 1965-66 national survey of "consortia" (Moore 1967), which was based on very incomplete data, identified 1,296 "existing" or "planned" consortia involving more than 1,500 institutions. There has not been a comparable survey at the national level since then, but a survey in New York (College Center of the Finger Lakes 1970) identified 425 cooperative arrangements in that state alone.

The Guide to Interinstitutional Arrangements (Connors et al. 1974) conservatively estimated "more than 10,000 cooperative/coordinative institutional relationships" at that time. A review of the literature of the last five years suggests the number has continued to escalate dramatically. There probably are few college presidents in the country who are fully aware of all the cooperative arrangements involving their institutions.

The most recent indication that perhaps only the tip of the iceberg has been visible thus far comes from a random survey conducted in 1978 by the American Association of Community and Junior Colleges (Gilder 1979). A questionnaire mailed to 300 members asked for identification by name of each of the institutions' cooperative arrangements. The 148 replies provided a 49.3 percent return. The number of "cooperative arrangements" reported ranged from a low of 20 for a small college to a high of 1,700 for a multicampus district. The average number of cooperative arrangements was 99.6 per institution.

Another study completed in 1978 (McKeefery), cosponsored by the American Association of State Colleges and Universities, focused specifically on public-private cooperative programs. The study found a growing trend to cooperation and listed 170 cooperative programs involving 775 colleges and universities. In announcing a publication on the findings, Allan Ostar, executive director of AASCU, stated: "Cooperation is not a luxury but a necessity" (*Chronicle of Higher Education*, September 10, 1979, p. 7).

In addition to the rapid growth of voluntary systems is a push from government agencies for interstate and intrastate regionalism. In a national study completed in 1978, 35 of the 50 states reported serious attention is being given to the concept of regionalism as an aspect of long-range planning and coordinating of postsecondary resources (Martorana and Nespoli, June 1978). Using the criterion of official state recognition for inclusion, the study analyzed 67 case studies of regionalization being implemented and 24 other cases under study.

The trend to statewide coordination and governance of public in-

stitutions (so evidenced by 1202 Commissions, Education Information Centers, Education Opportunity Centers) is well documented elsewhere and does not need elaboration here. It should be noted, however, that like the establishment of a Department of Education at the national level, statewide coordination and governance is a part of a much larger movement to ever increasing levels of centralization and interdependence.

To further illustrate the rapid growth that is occurring in institutional external relationships, two specialized fields are briefly noted. One is cooperative education, where a student alternates between a program of formal study and on-the-job work experiences. In the late 1950's only 35 institutions of higher education offered such arrangements, whereas in 1979 the number was over 1,100 (Keeton 1979). Further, an increasing number of institutions are finding it advantageous to conduct cooperative education programs through a multi-institutional base of operation.

Another area that has experienced phenomenal growth and that has been reviewed nationally is interlibrary cooperation. A study of 125 "academic library consortia"* in 1972, commissioned by the U.S. Office of Education, found that 90 percent of the cooperative arrangements were established since 1960 and over 75 percent were established since 1965 (Patrick 1972).

Chronological Founding of Academic Library Consortia

Year Founded	Number Founded
1931-40	2
1941-50	3
1951-60	5
1961-65	16
1966-71	99
1931-71	125

The ASLA Interlibrary Cooperation Committee in a national inventory of library cooperation in 1978 identified over 750 single-type, multitype, and interstate cooperatives and networks. It has been observed that many of the single-type cooperatives are later reincarnated as multi-type cooperatives (Hamilton 1977).

*Libraries generally are classified by four types: academic, meaning a college or university library; school; public; and special. The referenced study defined an academic library consortium as one in which more than one-half the members were academic libraries.

A partial listing of other specialized fields that have experienced similar linkage developments includes: art education and art councils; allied health, nursing education, and medical programs; outreach, community-based, nontraditional programs; software and hardware computer networks; and international education. The limitations of available data do not permit an adequate review of these developments at this time.

Academic
faculty exchange
joint appointments
visiting scholar/lecture
research and development grants
research equipment and facilities
joint curriculum development
disciplinary seminars and workshops
joint instructional material preparation
joint courses
teaching improvement
joint majors or departments
joint degrees
joint program evaluation
continuing education
international education
areas studies institutes
faculty development

Administrative
consortium publications
consortium governance/ policy procedures
common calendar
joint recruitment
joint admissions
joint purchasing
service contracts
facilities sharing
joint staff (attorney, etc.)
telephone network
computer network
television network
information network
library exchange
courier services
institutional research
long-range planning
credit union
insurance on building
health insurance
personnel training
class scheduling
travel insurance
fund raising
administrative appointments
workshops and conference procedures
summer school
January term

Community
apprenticeship programs
work-study programs
cooperative education
cultural and arts exchanges
regional involvement

Student
student insurance
health-care staff
health-care facilities
cross-registration
student exchange
joint bus transportation
tuition waivers
cooperative off-campus programs
university without walls
foreign travel and study
internships
joint counseling/ remedial services
joint placement
joint calendar of events
cultural/art program exchanges

The next edition of the *Consortium Directory*, scheduled for publication in early 1980, will require an expanded indexing system.

Range of Cooperative Programs:

- Consortium Directory Index

Everything that an institution might do individually probably has been done cooperatively somewhere else. The program information index of the *1977-78 Consortium Directory* (Patterson and Burns (1978)), which lists only those 118 organizations that are considered general purpose consortia, identifies the nucleus of activity for the more established cooperative arrangements.

Range of General Purpose Consortium Programs:

- ERIC Search of Cooperative Topics

A recent computer search of the ERIC system using the descriptors "interinstitutional cooperation" and "consortium" revealed the topics reported below. They were drawn from literature published in the last three years that addressed the subject headings within the context of interinstitutional cooperation. The topics were screened to avoid duplication of the already identified programs listed in the *Consortium Directory*.

Range of Cooperative Topics Reported in ERIC Search

---

lifelong learning
urban centers
rural outreach
community college without walls
career changing
serving part-time students
community-based programs
regional resource learning centers
public library learning laboratory
alternative education
experiential learning
place-bound student programs
distance-learning systems
competency-based education
computer-based instruction
interdisciplinary programming
fine arts exchange
human relations instruction
science curriculum evaluation
area health education programs
nursing education/field service collaboration
medical schools communications
local government problem solving services
local history study
cooperative sports communications
student articulation/orientation/retention
quality of student life
financial aids
planned mergers
master planning
interstate student migration
regionalization
resource allocation
reciprocity

publ.c/private cooperation
education/industry/ government partnerships
university/museum relations
outdoor education
prison education
retirement home programs
aeronautics/astronautics programs
religious education
academic common market
interuniversity cooperation
state controls
federal regulations
institutional policy assessment
trustee involvement
proprietary school cooperation
small-college consultation
tax consultation

• Library Cooperative Activities

In a previous section of the monograph on the number of cooperative arrangements, brief reference was made to the rapidly growing number of library networks. To illustrate the breadth and depth at which cooperation might occur within a specialized area, the varied types of cooperative library activity identified in a 1975 national study (Black and Cuadra 1975) are listed below.

Range of Library Cooperation

---

centralized acquisitions and processing
assigned subject specialization acquisitions
other activities - acquisitions
bibliographic center operation
bibliographic verification
bindery services
reciprocal borrowing privileges
catalog card production
cataloging - other support
shared on-line cataloging
central resource or storage center
charging system
clearinghouse
special community services
consulting services
delivery system
expanded interlibrary loan service
management, planning, policy development
media loan
media production
media rental
meetings
microfilming
periodical indexing
photocopying services
public interest programs
joint purchasing
recruitment programs
reference services
joint research projects
special collections
shared staff
training or upgrading of staff
union catalogs and lists - production/maintenance
workshops

National Organizational Activity: Events among national educational associations provide another barometer of the interest in and magnitude of emerging cooperative relationships.

- The Association of Governing Boards of Universities and Colleges has included major presentations on interinstitutional cooperation in its last four national meetings (1977-79).
- The theme of the 1979 Annual Meeting of the American Council on Education included cooperation and competition as major topics.
- Other associations that have featured cooperative sessions in recent national meetings include the American Association for Higher Education, the American Association of State Colleges and Universities, the American Association of Community and Junior Colleges, the Association of American Colleges, the Association of University Programs in Health Administration, the National University Extension Association, and the Society for College and University Planning.
- The Council for the Advancement of Small Colleges, sometimes considered a consortium, has become a major resource for its member institutions in recent years. CASC is affiliated with the Small College Consortium of 51 colleges and sponsors a National Consulting Network. In the fall of 1979, CASC received a four-year $978,000 project grant to strengthen undergraduate education in private higher education.
- The National University Extension Association has a division on consortia and interinstitutional cooperation of several years standing.
- The American Association of Community and Junior Colleges has three major projects that are supportive of community-based cooperation: Policies for Lifelong Education, Center for Community, and Education Work Councils. AACJC also completed a major study of community college/vocational education cooperation in 1978 that was cosoponsored by the American Vocational Association (AACJC/AVA 1978).
- The American Association of State Colleges and Universities sponsors an Urban College and University Network involving over 280 institutions and recently published a major report on *Cooperative Arrangements Between Private and Public Colleges* (McKeefery 1978).
- The American Association of State Colleges and Universities and the American Association of Community and Junior Colleges cosponsor the Servicemen's Opportunity Colleges, a network of more than 300 institutions committed to the postsecondary education of military personnel and veterans (AASCU 1979).

• The Council for the Advancement of Experiential Learning, in Columbia, Maryland, which began as a project with 10 institutions five years ago, now is a permanent association with over 325 members (CAEL 1978-79).

• The National Center for Educational Brokering, founded in 1975, represents an "intervention" type of linkage agency between students and institutions. The *1979 Directory* (NCEB 1979) identified 302 such agencies.

• Elderhostel, which began in 1975 when five New Hampshire colleges enrolled 200 older adults in short-term summer academic programs, enrolled 15,000 people in 240 participating colleges in the summer of 1979.

• OCLC, originally the Ohio College Library Center when founded in 1967, now has 1,700 participating college libraries in 46 states, employs over 400 staff, and operates with an annual budget exceeding $21 million. In 1978 OCLC catalogued 10.6 million books and publications, and printed 82.4 million catalog cards (Kilgour 1979).

• EDUCOM, based in Princeton, approved in 1979 the establishment of EDUNET as a permanent national computer network for colleges and universities (EDUCOM Summer 1979).

• The National Student Exchange, which began with three institutions in 1968, has now expanded to 50 institutions in 1979. NSE has facilitated the exchange of 5,500 students since its founding, with 1,204 occurring in 1979.

• The President's Commission on Foreign Languages and International Studies proposed in its final report in October 1979 (Scully 1979) that a network of 125 to 155 national and regional centers for international studies be established, with most of them based at colleges and universities.

• The Council for Financial Aid to Education, a nonprofit service organization that encourages voluntary support of higher education, actively encourages business corporations, government agencies, and educational institutions to work cooperatively in joint programs to solve social problems.

The references presented above are only a sampling of the interests of national educational associations in different aspects of interinstitutional relationships. It also should be noted that educational associations at the National Center for Higher Education in Washington and elsewhere increasingly in the last two to three years are entering into joint sponsorship of projects, services, research, publications, and meetings. Some of the more active organizations in this re-

gard include the Association of Governing Boards of Universities and Colleges, the National Association of College and University Business Officers, the Council for the Advancement of Small Colleges, the Association of State Colleges and Universities, the American Association for Higher Education, and the American Council on Education.

What Should Be Considered in Analyzing External Relationships?

Managing by Objectives

Institutions of higher education, often without full awareness of their involvements, are engaged in a myriad of complex relationships that exact an enormous amount of time, energy, and other institutional resources. This arena of activity is rapidly expanding, particularly in the field of governmental relations, and is a major reason for the growing army of institutional administrators in the external agencies.

It is no longer adequate for presidents just to have a general feeling about this realm of activity. The time has arrived when they need to inventory and analyze external involvements with the same care they give internal operations. It is not suggested that institutions go to the extreme in detailing and analyzing inconsequential affairs where the process itself would be self-defeating. Recordkeeping should be kept on a pragmatic basis and the questions should be kept simple: What are the involvements? What are the costs? What are the benefits?

Numbers Versus Control

How many associations, commissions, systems, consortia, networks, and cooperative relationships should an institution sustain? There is no set number that is recommended for institutions but there are some important factors to consider in making such a determination.

To start, there are some relationships where there really is no choice regardless of the costs or benefits. For public institutions, these would include statutory systems. For public and private institutions, there is little choice in regard to accreditation commissions and associations. As responsible participants within the larger systems, however, institutions individually and collectively should press for the same level of accountability among these organizations that is now being required of individual institutions. Independent, comprehensive evaluations are equally in order for national associations, regional commissions, and state systems on a periodic basis.

The number of external relationships of an institution should have some correlation to institutional size. Unfortunately small institutions generally have a greater need but less capacity to cooperate than large

institutions, which probably have less need but a greater capacity to cooperate. One incentive for larger institutions to consort is that they also have the capacity to be the larger beneficiary.

Related to institutional size are the managerial style of the president and other key administrators and span of control limitations. If the chief executive officer is willing to delegate a large measure of responsibility to other personnel regarding cooperative relationships, the institutional range of participation can be increased. If, on the other hand, the president chooses to be directly involved in each relationship, limitations obviously will follow accordingly.

Special Purpose Versus General Purpose Consortia

The phrase "special-purpose consortia" is commonly used interchangeably in the literature with the phrase "single-purpose consortia" to designate cooperative arrangements devoted to a very specific program area. The special-purpose or single-purpose description also often can be translated to mean a "single program." Some of the more frequent special purpose consortia are library cooperatives, computer networks, and joint international programs. In the United States alone there are literally hundreds of each of the three types.

General-purpose consortia are distinguished from special-purpose consortia in that they are used to administer two or more cooperative programs within a common structure. In the 1979 Consortium Directory listing, 126 general-purpose groups are identified. Most of these administer at least six or eight separate services and programs; several administer as many as 30 or 40 different activities over a one-year period.

Another distinction between special-purpose and general-purpose consortia is that the former tend to be ad hoc. Most frequently they are initiated for a specific purpose and time frame and are dependent in large part, if not totally, on external funding. To become permanent, they eventually need to become self-supporting or shift to institutional, hard-money sponsorship.

Although many general-purpose consortia are being tested in terms of their durability, the total number continues to edge upward (Patterson 1979). A major advantage of a general-purpose consortium over a series of special-purpose arrangements is that the costs for governance, administration, communication, and evaluation can be minimized. It is costly to create a new structure each time a new cooperative service or program is initiated. Frequently, though, entrepreneurs who prefer to launch new programs, projects, and organizations rather than be encumbered with established systems will sell an idea to a

funding agency for a set period of time. Because "cooperating institutions" are not asked to appropriate major support from their own resources to participate, the temptation to take a "free ride" generally is accepted without too many questions asked. One of the extravagances of this practice is that the soft funding might have been more effectively employed by the same institutions in some other way.

Point of Diminishing Returns

In examining external relationships of all types, an institution should consider the point of diminishing returns or the total number of organizations in which it can effectively participate. The questionnaire survey of the American Association of Community and Junior Colleges (Gilder 1979) found an average of 100 cooperative arrangements per institution. If this is representative of the involvements of institutions in general, then is the number (which likely will increase each year) manageable? Each institution can best answer that question for itself. The point of diminishing returns for each institution is dependent on the factors of size, administrative style, and the costs and benefits of the involvements individually and collectively.

What Are the Costs and Benefits of Cooperation?

The basic starting point to evaluate a service, a program, an institution, a cooperative arrangement, an organization is to ask: What is its purpose? (Anderson et al. 1975). This is a universally accepted truism among accrediting commissions. The same principle is applicable to assessing the worth of groupings of institutions.

The income squeeze in higher education is pressuring institutions and related organizations to give increased attention to the financial costs and benefits of their activities Caruthers and Orwig 1979; Mortimer and Tierney 1979); and, for good or bad, that pressure will continue to increase in the immediate years ahead. Prior to focusing on the financial aspects of cooperation, however, it is necessary to place that dimension in its proper perspective.

Few if any of today's educational organizations were founded with the primary purpose being to achieve cost effectiveness. Consortia and other educational systems, like their member institutions, prefer to justify their value on their contributions to education and society. While there is increased acceptance of the need for greater accountability, a resistance to cost analysis per se still pervades most higher education quarters. Reluctant compliance is the order of the future because funding sources will allow benefactors no choice.

During 1977-79 when the Council for Interinstitutional Leadership was conducting on-site reviews of 37 cooperative case studies, visitation team members interviewed consortium, institutional, and community representatives to assess the value of the cooperative programs. A number of substantive consortia did not volunteer to participate in the project for a variety of valid reasons, including an absence of concern of member institutions for a cost analysis of their cooperative endeavors. Of the 37 cooperative program case studies that were examined, many of the institutional presidents, deans, and other staff made statements to the effect that their primary reasons for cooperating were to enrich programs, to strengthen the institutions, and to provide improved services. Though they were willing to have their programs analyzed, the cost effectiveness, even where it was being dramatically achieved, was downplayed in many instances as a secondary consideration.

Prior to directing the CIL cost-effectiveness study, the author participated in seven independent, comprehensive evaluations of regional

consortia from 1973 to 1977. In each instance he was one of a two-to-five person evaluation team. Most of the visits required three days for on-site review and three days for report writing. Additionally, team members were provided with governance documents, annual reports, board minutes, and other pertinent written materials prior to the visits. To expedite the process, an evaluation strategy, including appointments for interviews, was arranged in advance. A part of the ground rules in contracting for the evaluation was that the team would have access to any materials or any persons in the region that seemed relevant to the independent assessment. In each case, provision was made for interviews with:

- consortium staff and board members
- institutional personnel (presidents, deans, faculty, students, trustees)
- community representatives (industry, business, labor, media, civic, minorities)
- funding agencies

Evaluation Criteria

The basic criteria that were used to conduct the evaluations were as follows:

1) What are the consortium's purposes? Where can the following consortium statements be found?

a. a clear and concise mission statement?
b. lists of specific short-term and long-range goals and objectives?
c. expressed relationships between consortium objectives and learners?

2) In what ways has the consortium fulfilled its mission, purposes, goals, and objectives? How does the consortium measure its effectiveness? In what specific ways has the cooperative arrangement:

a. provided new educational opportunities?
b. improved the quality of programs?
c. rendered cost-savings and effectiveness?

3) In what ways do the consortium's mission and operational structure allow and encourage the organization to address priority needs of learners and potential learners in the community/region served by its member institutions? Does the consortium effectively measure and meet community needs?

4) Does the consortium's governance structure allow and encourage the organization to achieve its purposes efficiently and effectively?

5) What is the role of the consortium administration? How adequately has this role been delineated? How well has the consortium administration and staff performed?

6) What are the responsibilities of the consortium's member institutions? What are the commitments of the member institutions—inkind service and hard support—to the cooperative arrangement? How adequate are the consortium's resources to its basic purposes?

7) How adequate are the available physical facilities, equipment, libraries, and other learning resources of member institutions for the fulfillment of the consortium's objectives?

8) What provisions are made in the governing and decisionmaking processes for representation of instructional staff, students, institutional trustees, the public at large, and minority groups?

9) In looking to the consortium's development over the next three to five years:

a. what are the major issues to be addressed by the consortium?
b. what options and recommendations for courses of action does the evaluation team offer for consideration?

A last ground rule that was followed in preparing for the consortium evaluations was to insure a balance of backgrounds among the visitation team, including the participation of nonconsortium personnel, and to select team members from outside the geographical region of the member institutions.

The unique circumstances of each consortium may require slight modification in the evaluation procedures and criteria to meet particular needs, but the intent of the design is to insure an *independent, comprehensive* evaluation of the total consortium operation. A basic flaw in self-studies and in most "outside" program and project evaluations is that they are designed and/or staffed to insure a favorable conclusion.

Cost Analysis Literature and Methodology

Launching the CIL-Carnegie Project: In 1977, when CIL initiated the study of cost-effective cooperation, an extensive investigation was made of the cost-analysis literature and of research methodologies that would be applicable to multiinstitutional arrangements. Additionally, a number of people of national prominence in college management and finances were contacted for guidance and advising. It soon became evident that the theoretical base for the research was

weaker than had been expected. A major effort was needed early in the project to develop research guidelines and a sound analysis methodology.

To give credence to the undertaking, a nonconsortium person was sought to review relevant literature, who was thoroughly familiar with the financing of higher education, who had a background in economics, and who had experience in the business management of institutions. Thomas O. James, then the treasurer and business manager of Chatham College, and current vice president of financial affairs at Birmingham Southern College, emerged as a person particularly qualified to give major direction to the project. James, an active member of the National Association of College and University Business Officers and chairman of the Association's Small Colleges Committee, was also a member of the National Advisory Committee to the CIL project.

James used as a launching pad for his research several studies and financial manuals that were prepared under the auspices of the National Association of College and University Business Officers, the National Center for Higher Education Management Systems (NACUBO and NCHEMS 1977 and Gamso 1978), and the American Council on Education (ACE 1978). In finding the literature devoid of cooperative analysis research and methodology, James set about to establish guidelines for the CIL project by drawing from his extensive knowledge of financial management principles and by drawing from his many years of experience as the chief business officer of Chatham College, which was a member of the Pittsburgh Council on Higher Education.

The statements that follow on costing consortium projects were abstracted from research papers prepared by James in relation to the CIL cost-effectiveness study.

Costing Consortium Projects: A review of the literature reveals that there is no universally accepted technique for cost analysis in higher education, nor indeed are any of the techniques or methods of cost analysis from managerial economics in widespread use in higher education. Cost analysis is not a highly developed art in higher education as it is in the corporate world or in the academic disciplines of economics and business administration. The vast majority of institutions of higher education use the records of their costs in recent years—their historical costs—as the basis of their cost-analysis system. Many of them include average costs in their use of historical costs, but the technique for determining average costs varies widely from institution to institution. Moreover, even among those institutions that use

average costs, data between institutions are seldom compared because the reorganization of data to achieve comparability requires great effort and the results are viewed with skepticism.

On the basis of these findings, it is evident that the only methods available to consortium directors for determining the cost effectiveness of their programs must be simple methods that rely on the use of whatever historical data are available at the member institutions and in the financial records of their cooperative programs. These will usually include one or more among the following kinds of cost information:

- The direct costs of programs—those which have been budgeted directly to the programs;
- The total costs of programs, which combine the direct costs of a program with some indirect costs that must be estimated because they cannot be readily identified as the costs of a particular program but are shared among programs;
- Average costs, which are unit costs.

To have historical data at hand is not enough. To the extent that cost effectiveness weighs in the decision-making process, the consortium director needs to have available a systematic approach for the analysis of those costs. Where adequate cost data may not be available or may not be fully defensible, a modified technique for arriving at cost data may be necessary.

Cost analysis is defined in *A Study of Cost Analysis in Higher Education* (American Council on Education 1978) as ". . . any manipulation of cost data that is done to provide relevant information for those who make decisions." The study further states that the term "cost analysis" cannot be defined without developing four categories of descriptors for the concept:

- The objective or purpose of the cost analysis for stewardship purpose (e.g. historical costs).
- The type of cost-gathering tehcnique that is to be applied (e.g. direct or indirect costs).
- The method of cost determination used (e.g. project costs or costs accumulated by organizational unit).
- The units of measure used and the time period included (e.g. current dollars and costs gathered annually).

Consortia generally are limited to historical costs because they must use data that are comparative or common for all institutions involved in the project being analyzed. For the consortium director, cost analysis is the manipulation of cost data to provide relevant information on the economic feasibility of a particular project.

College and University Business Administration (NACUBO 1975) identifies 12 "Fundamental Considerations for Determining Cost information in Higher Education."

- The purpose for which cost information is to be used should determine work within which cost information is developed.
- Cost information should be based on the accrual method of accounting.
- Cost data should be reconcilable to official financial accounting data.
- Nonfinancial data should be reconcilable to official institutional records.
- Definitions used in cost determinations should be applied uniformly.
- Cost information and related costing units should cover the same period.
- Cost information should be consistently determined.
- Cost should be attributed to a cost objective based on a casual or beneficial relationship.
- Indirect cost should be allocated based on quantitative measures that can be applied in a practical manner.
- Common cost incurred to provide two or more services should be allocated in an equitable manner.
- Capital cost of a cost objective should reflect the applicable expired capital cost of the period.
- Cost information should be accompanied by a disclosure statement.

James states that cost analysis in a consortium is a negotiated process involving data reconciliation, the process of identifying and giving appropriate consideration to differences in two or more sets of data. He summarized his position in "Costing a Consortium Project" ("Business Officer") as follows:

> . . . the costing of a consortium project is made simple by the fact that the possible analytical tools to perform such a task are dictated by what is available in the institutions with which they deal. The historical data base is the reality in most institutions of higher education. Therefore, the consortium project is costed using full or full average costs, including indirect costs if available. The projects that use comparative costs or cost/benefit analysis are costed using a negotiated list of accounts developed with institutional professionals and are reconciled with institutional cost data as much as possible. Nonquantifiable contributions to important institutional objectives are highlighted. The level of sophistication of data gathering is determined by the stage of development of the project as well as by its size and importance. The list of accounts that are used are those that are easily available at all of the institutions involved in the project and those that can and should be added, given the nature and size and stage of development of the project.

Consortium directors have often had their projects criticized because of the lack of sophistication or detail in their project cost analyses. From this article it is hoped that such criticism can be shifted to the state of the art of cost analysis in higher education (James 1979, pp. 26-28).

Cost Effectiveness Findings

The CIL study investigated six cooperative program areas: cross-registration, library and media cooperation, cooperative student services, group purchasing, cooperative nontraditional structures and distance-learning systems, and cooperative academic programs.

Summary Descriptions of the Findings:

• *Cross-Registration.* Cross-registration has been adopted as a formal program of cooperation among some 50 consortia of colleges and universities. Until the CIL study was undertaken, however, there was no empirical analysis of whether the programs met their objectives. The study reviewed cross-registration programs at six consortia to: (1) assess their effectiveness, enlarging the potential for study through opening academic doors to students their own institution could not open except through the consortium; (2) measure student use of the programs; and (3) compare cross-registration costs with its benefits estimated in dollar amounts. The six consortia were chosen for their varied characteristics and their diverse membership, which included: three liberal arts colleges; a liberal arts college and two state universities; four liberal arts colleges and a state university; four liberal arts colleges, a theological center and a private university; nine theological schools; and four liberal arts colleges, a business college, a theological school, a community college, and three universities.

No problems were encountered in the collection and analysis of data on the increases in academic opportunities and the student use of those opportunities, but there were problems in the cost-benefit analysis. Only one consortium estimated its program's costs. Senior officers of colleges and universities usually preferred that the costs not be estimated, viewing them as small and not worth measuring. Another more fundamental objection commonly stated was that measuring the costs would be contrary to the purpose of cooperation, which is for the mutual benefit of the institutions and their students, faculty, and staff. There was interest in the measurement of cross-registration benefits, although opinions differed on the merits of various ways to measure them. The method selected sets the benefit value as equivalent to an allocation of the institutional costs at the institution offering the courses. If, for example, cross-registration accounts for 2 percent of an institution's registration and its direct instructional costs

are $3,000,000, an estimate for cross-registration's benefits is set at $60,000.

The main findings are uniform. The programs meet their objectives either fairly well or extremely well. The praise is high; the criticism is muted. Educational options are being enlarged to the extent sought by the member institutions and are being used by students, at little or no cost except where intercampus bus service is provided. The ratio of benefits to costs is extremely high regardless of how costs and benefits are measured.

• *Library and Media Cooperation.* Interlibrary cooperation is an old concept whose practice began to take on real significance in the mid-1960s, thanks, in part, to federal legislation in the 1966 amendment of the Library Services and Construction Act of 1964 and subsequent federal appropriations. The most recent national inventory of library cooperation, *The ASLA Report on Interlibrary Cooperation 1978*, notes 92,801 libraries in the U.S. and 750 single-type, multitype, and interstate cooperatives and networks.

On the voluntary side, library sharing occurs either through single-purpose and special-purpose arrangements dedicated solely to library cooperation or through multipurpose consortia that include library cooperation as one of several programs. Frequently, voluntary systems are inseparably intertwined with state-supported systems.

A 1975 national study (Black and Cuadra) identified 38 program areas in which academic library consortia participate. They range from centralized acquisitions and processing binding services to media loan, production, and rental to the production maintenance of union catalogs and lists. In the CIL case studies, areas of cooperation include film rental, delivery services, union catalogs, serials lists, audio-visual resource pools, and journal sharing.

There are numerous reasons for library cooperation, but perhaps the most convincing is economic necessity. It is widely acknowledged that no single university can afford to continue financing the same level of acquisitions each year when the annual price rise is so far ahead of the average economic growth and general cost of living indexes.

Procedures for assessing the costs and benefits of library cooperation, however, are not widely acknowledged. Thus, a range of assessment techniques were used in the case studies. The most simple and practical approach, where possible, is to compare the costs and benefits without cooperation to the costs and benefits with cooperation.

Although such comparisons are often theoretical, they remain valuable indications of the cost benefits of library cooperation.

For academic institutions and consortia considering library cooperation, Ruth Patrick's *Guideline for Library Cooperation* (1972) can be helpful. Development of library cooperation for academic consortia includes four phases; they are (1) exploratory, during which desired benefits and potential members are identified; (2) planning, during which objectives, organization, financial support, and facilities are identified; (3) development, during which activities, personnel implementation schedules, policies, and evaluation processes are identified; and (4) operation and evaluation, during which trial activities, evaluation, modification, full implementation, and reevaluation are conducted.

• *Cooperative Student Services.* Student services are providing a fertile field for collegiate cooperation. The rapid development of these services emerged along with the active extension of humanizing practices, beginning in the 1930s, and kept pace with the advancement of the social sciences. In the 1950's and 1960's, these services greatly expanded as did enrollments, the holistic view of learning, and the needs of learners. This expansion attempted to keep ahead of students' needs, as well as those of institutions, as the numbers of enrollees grew. Student services attempted to bridge the gap that developed between size and effectiveness, complexity and opportunity.

When there were adequate funds, an expansion of student services was possible; in the 1970's, however, adequate funding rapidly diminished, even though the need continued.

How, then, could higher education provide the needed range and quality of services, while holding the line or reducing expenditures and maintaining or improving services? A careful rethinking of student services was required of institutional leadership.

To those consortium leaders engaged in substantial relationships with others in their community of colleges, their work together provided a natural base on which to build selected functions within a comprehensive range of student services. In those cases where care was exercised in the analysis of the operations of a given service, and administrative follow-through occurred to define appropriate sharing in these operations, substantial student services in consort emerged. The record of achievement (documented later in this chapter) provides evidence of worthwhile gain to the institutions and to their student beneficiaries.

As colleges and universities confront the economic demands of the 1980's, each institutional offering and each administrative service will

be reviewed to ascertain its value. As institutional budgets are constricted, valuable services to students should not be strangled. To discontinue student services merely because institutional leadership cannot perceive alternative strategies for organization and operation would be at once counterproductive and tragic.

Institutional board members or chairpersons, presidents, vice presidents, and deans should now advance the exploration and definition of joint services in designated areas by calling for a careful detailing of the systems and procedures used in each service function. Analysis of the commonality of the functions in comparison with those of other institutions in a group defined as their community will give specification to those functions that are amenable to development in consort.

• *Group Purchasing.* Only a few consortia have undertaken voluntary cooperative purchasing, but the experience has been rewarding for those that have. The Massachusetts Higher Education Consortium, building on the earlier experiences of Five Colleges, Inc. and the Ohio Inter-University Council Purchasing Group, for example, provides participating institutions with a 10 to 20 percent savings on purchases made cooperatively. The Hudson-Mohawk Association of Colleges and Universities (HMACU), comprised of 15 institutions, saved its participating members $68,000 and $106,280 in the first two years of cooperative purchasing. Success required direct "orders" from an important chief executive officer, agreement among several other presidents to cooperate, and willing purchasing officials. The activity is a rewarding one for the Association.

After the presidential directive was received, the purchasing agents agreed on product lines that promised savings through quantity purchases. The group estimated their annual campus requirements and agreed on product specifications. Invitation-to-bid letters were sent to every vendor used by the colleges; local newspaper ads alerted others. A bid opening date and time were set, sealed bids were received and opened, after the purchasing agents reviewed the bids and product samples. Usually the lowest bid is accepted unless there is good reason to do otherwise. The campuses made a good faith commitment to buy from the successful bidder. Thereafter, all relationships took place between vendor and the campus; all contacts by sales or servicement, all deliveries and invoicing, all warehousing. In short, good standard purchasing practices were followed, with Association staff providing only administrative support.

HMACU started its purchasing with fuel oil, miscellaneous office

supplies and paper, and now has 11 contracts for 10 colleges. Other groups have started with other products. The specific initial product is not as important as is an agreement to start. Savings average in the 10 to 20 percent range, with larger purchasers realizing the small percentage but more dollars because of volume. The small institutions experience the reverse. It is difficult to understand why more colleges do not undertake group purchasing. Hospital groups, in contrast, purchase great quantities of products cooperatively. HMACU has found that money can be saved even though the participants also have access to an effective state purchasing system.

An indirect benefit from group purchasing is that the purchasing officials for the colleges, in dealing with the same vendors and companies, often have similar problems. By comparing notes and experiences, insights and additional savings often can be realized.

• *Cooperative Nontraditional Structures and Distance-Learning Systems.* Winston Churchill's perceptive decription of Russia, "A riddle wrapped in a mystery in an engima," would apply equally well to the various cooperative, nontraditional structures now being employed by an increasing number of institutions to deliver higher education programs. A growing conservatism on the part of taxpayers and public officials, which began in the 1960s, has led to an emphasis on the more efficient use of existing financial, physical, and human resources, the elimination of unnecessary duplication, and the maximization of access and services to learners.

Across the U.S., there are dozens of noncampus colleges, outreach programs, and satellite campuses. Just as noncampus colleges have made it possible to provide educational opportunities for those who cannot or do not wish to travel to a traditional campus, new educational systems that use technology and media have made it possible to provide instruction for audiences removed from any formal classroom setting.

The nontraditional case studies examined by CIL included distance-learning programs, off-campus contracted library arrangements, shared campus facilities, a community college without walls, and off-campus learning centers organized to serve geographically distant students. "Nontraditional" seems to be the most appropriate collective term for describing the great variety of programs that deviate from the customary structure and approach of higher education.

Nontraditional educational consortia, like nontraditional institutions, have emerged because they meet needs and enable activities that could not be accomplished as well or at all unless new struc-

tures were created. In the past, colleges and universities have not been noted for giving priority interest to institutional cooperation. Where substantive cooperation has occurred and worked, it usually has resulted from financial and academic interests that could not be addressed by individual institutions.

The case studies examined in the CIL study were not the only examples that could have been used. However, the cooperative arrangements that were reviewed are representative of similar activities taking place in other parts of the nation. Because there is no established methodology to assess the costs and benefits of nontraditional systems, each case analysis had to be developed based on the best comparative data available. Although these initial studies focused primarily on cost effectiveness, there obviously were other very significant educational benefits in each case as well.

• *Cooperative Academic Programs.* For many American institutions, the enrollment declines predicted for the 1980's have already begun. As the declines become more widespread, the pressures on low-enrollment departments and programs will intensify. As an alternative to program elimination, institutions in proximity to make academic cooperation feasible should begin now to work together.

The seven academic cooperative programs that were reviewed demonstrate concretely that joint departments and programs can work, do result in cost effectiveness, and do provide special benefits to the cooperating institutions. Investigation has shown that joint programming not only is less expensive but also has been the salvation of many programs that could not be established or maintained without interinstitutional cooperation.

Joint academic long-range planning is the first step for institutions to prepare for academic cooperation. Careful planning that involves faculty and judicious action by faculty and administrators to replace or not replace retirees and those who leave for other reasons can allay faculty fears and can allow departments to conduct orderly and productive transitions.

The cost effectiveness in each case study is demonstrated in different ways, according to the data that were available and the way they were reported. For example, the New Orleans Consortium Department of Social Work, during 1977-78, produced tuition fees and grants in excess of direct costs to the institutions in the amount of $110,200. The Tri-College University Educational Administration Programs would have cost an additional $62,457 during 1977-78 if two independent programs existed rather than a single cooperative

one. The joint summer school operated by the Greensboro Regional Consortium has generated $850,000 in project monies for the member institutions over the past 10 years. The Quad-Cities Graduate Study Center operated at a cost to Iowa and Illinois of $1,154,000. This is $1,330,000 less than the cost would have been to the states if the Center's students had enrolled in traditional institutional programs.

Other, less mature programs involving academic cooperation include the New Orleans Consortium's Modern Foreign Language Center and Unique Majors Program, the West Central Wisconsin Consortium's Interinstitutional Review of Existing Programs and Cooperative Curriculum Planning, the Greensboro Regional Consortium's Cooperative Music Degree Program, and the Five Colleges' Cooperative Fine Arts Activities.

In each case, the unanimous conclusion of all program directors is that the same or similar academic services could not be provided as economically as they now are without cooperation among institutions.

Summary of Cooperative Cost Savings and Benefits:

The savings and benefits reported below are extracted from the 37 case studies analyzed by CIL during 1978 and 1979. The figures that are reported are based on the most recently available data and are, in most cases, for a one-year period. Additional information on each case study and on the cost-analysis procedures used is available in *Costing Collegiate Cooperation* (CIL 1979); an unabridged report of 440 pages and a monograph that highlights the findings in 36 pages.

- *Cross-Registration*

Atlanta University Center: derived value of instruction, $1,518,000.

Boston Theological Institute: 1,200 cross-registrations; 8.5 percent of all registrations; not quantified because institutional costs of instructions are not available.

Five Colleges, Inc.: derived value of instruction, $1,889,000.

New Orleans Consortium: derived value of instruction, $102,000.

Pittsburgh Council on Higher Education: $211,000.

Tri-College University: $451,000.

- *Library and Media Cooperation*

Tri-College University: joint film center, avoidance of duplicative books, and joint cataloging, $50,416; benefits of sharing journals not quantified.

University Center of Georgia: inter-library delivery service, $6,287; inter-library book savings reported by 1 of 10 librarians, $9,010.

*See Appendix B for a listing of consortia and their member institutions.

Union of Independent Colleges of Art: joint film center, $124,460.

Greater Cincinnati Library Consortium: joint film center, $26,956.

New Hampshire College and University Council: inter-campus delivery systems, $44,168.

Dayton-Miami Valley Consortium: inter-library delivery system; insufficient records on 18,125 bulk deliveries prohibits a quantifying of savings.

Central Pennsylvania Consortium; journal sharing, $10,000.

Rochester Regional Library Council: joint film center, $47,335.

• *Cooperative Student Services*

Union of Independent Colleges of Art: cooperative admissions; average benefits of $67,667 for each institution.

Hudson-Mohawk Association of Colleges and Universities: joint student recruitment, $34,000.

New Hampshire College and University Council: cooperative admissions, $34,-953.

Graduate Theological Union: common registrars office, $85,214.

New Hampshire College and University Council: $27,000 invested over two years helped generate $4,409,191 in additional student financial aid monies.

Atlanta University Center: joint career planning and placement services; savings for each institution, $14,500.

• *Group Purchasing*

Hudson-Mohawk Association of Colleges and Universities: joint purchasing $106,280.

Associated Colleges of the Twin Cities: joint purchasing, $42,373.

Hudson-Mohawk Association of Colleges and Universities: cooperative surplus sale, $12,450.

Council of West Suburban Colleges: cooperative employees insurance program, $92,000.

Massachusetts Higher Education Consortium: joint purchasing, $669,000.

• *Cooperative Nontraditional Structures and Distance Learning Systems*

Coast Community College District: telecourse production; difference in production costs and income over 7 years, $521,662; gas savings for students nationally, $6,300,000.

Coastline Community College: contracted library services; cost avoidance over 7 years, $8,500,000.

Auraria Higher Education Center: FTE cost instruction averages 20 to 25 percent less for three institutions.

John Wood Community College: contracted institutions avoid building costs and reduce instructional costs; no figures given.

Mid-Coast Community College Services; outreach community college program; cost of instructional savings, $151,912.

York County Community College Services: outreach community college program; cost of instructional savings, $338,396.

• *Cooperative Academic Programs*

New Orleans Consortium: consortium department of social work with costs 2 to 3 times more if sponsored independently by each of the three members; no figures.

Tri-College University: joint educational administration program of three colleges would cost $62,457 more if offered independently by two members.

Quad-Cities Graduate Study Center: graduate center saved $1,330,000 in instruction and $1,422,716 in student travel.

Five Colleges, Inc.: saved on facilities, equipment, and faculty; attracted outside funding; no figures given.

Claremont Colleges, Inc.: joint science department; three colleges maintained one classroom/laboratory complex with one set of faculty; no figures given.

Greensboro Regional Consortium; joint Bachelor of Fine Arts; costs would be 2 to 3 times greater if the colleges had independent programs.

Greensboro Regional Consortium: consortium summer school, $80,000.

Are There Significant Cooperative Education Benefits Beyond the Cost Advantages?

In the CIL-Carnegie analyses of six program areas, there were eleven principal investigators making visits, interviewing personnel, and collecting data. Using a decentralized approach to conducting the project and employing varying analysis methodologies, there emerged a commonality of identified educational benefits, in addition to the cost avoidance and cost savings, that transcended the many forms of cooperation. Though the educational benefits are not amenable to precise measure, expression of their reality was strongest from institutional personnel who were participants in the cooperative projects. Summaries of their observations follow:

Duplication

Interinstitutional cooperation can be used to avoid costly and unnecessary duplication. The ability to provide greater services to learners by pooling resources rather than by attempting to meet the needs as perceived by individual institutions offers a much more efficient use of resources. In the past, when financial resources were readily available for higher education, the usual solution to meet an identified need was to create another organizational structure or institution. The cooperative approach offers an efficient and nonduplicative alternative as an answer to meeting future identified needs.

Quality

Institutions can strengthen the quality of their offerings and services through a cooperative arrangement. Joint sponsorship of programs, cross-registration of students, and sharing library resources expand and enrich educational opportunities and services for students at each participating institution. By creating additional options for students, the quality of their educational experience is increased. Furthermore, the opportunity to sample and use the curricula, faculty, and student services of other institutions or to create joint programs among them makes available quality learning experiences that otherwise would not be available to the students.

Diversity

In the same manner that cooperative arrangements can improve the

quality of educational experiences for students, they also can expand the diversity and breadth of that experience. The quality is difficult to measure but the diversity of the educational experience is concrete.

Access

Interinstitutional cooperative arrangements have made it possible to substantially increase access to postsecondary education for a variety of populations. For example, geographically isolated or place-bound populations have been served by cooperative outreach programs, new learning centers, and common-market colleges. Existing student populations at traditional colleges and universities have had access expanded through cooperative agreements related to joint programming and outreach programs, cross-registration, library cooperation, and student services. Some populations not adequately served by traditional higher education (for example, adults, minorities, women, handicapped, and economically disadvantaged) have, in the last decade, been served by new cooperative structures.

Financial Advancement

Cooperative efforts have made it possible for individual institutions, as a part of a larger cooperative structure, to obtain grants that otherwise they might not have received. Institutions can often make a case for support collectively that they could not make individually. They include institutions within a particular geographic region as well as institutions spread across the United States, but fulfilling a specific function. The cooperative fundraising activities make it possible for the cooperating institutions to provide better service for their students than they could without the additional funding.

Communication

The process of planning, establishing, and operating a cooperative arrangement has opened up new and creative channels of communication. The opportunity for open dialog with colleagues at different institutions develops new approaches to learning and provides important new services. Such communication and community initiatives have been a stimulant to interactions of increasing number and quality.

Alternative Systems

The cooperative programs reviewed in the CIL-Carnegie study re-

flect the educational needs and concerns of the institutions that comprise their membership. As an alternative system, arrangements do not replace existing structures, they supplement and enhance them in ways often not open to institutions internally. Alternative structures can be used for fast action when timing for achievement is crucial, and they can be employed over long periods of time for sustained influence on institutional growth and maturity.

Competition

Among the most noteworthy characteristics of American higher education are its individuality and the autonomous nature of its institutions. Colleges and universities were founded to achieve specific objectives. In the past three decades, many if not most institutions have attempted to be all things to the students they serve. However, most institutions lately have found themselves in competition with other institutions of their region for students and financial resources. One solution to the intense competiveness of the 1970's has been the creation of cooperative arrangements that reduce interinstitutional competition and increase cooperation. Thus, joint purchasing, joint library usage, and cross-registration, make it possible to attract and serve students that might not otherwise be available to an individual institution within its own structure.

Planning and Control

Institutional interreliance makes it possible for participating institutions to control their destiny much more directly. When free enterprise, whether individual or institutional, operates without a sense for community in higher education, it means that institutions necessarily will compete for students and dollars. When a cooperative arrangement is developed, however, planning and open communication between or among institutions assist in minimizing laissez-faire competition.

Efficiency

Interinstitutional cooperation, as a result of planning and open communication, can prevent needless duplication and inefficient competition. Postsecondary institutions in a given region or in a given academic area, regardless of where located, have in fact a monopoly on postsecondary education. The economic principles that apply to all large corporations apply equally well to colleges and universities. However, since postsecondary institutions are nonprofit, the regula-

tions related to restraint of trade are not applicable. In fact, uncontrolled monopoly is just as inefficient and unproductive for higher education institutions as it is anywhere. The greatest efficiency and the greatest benefits for students are achieved when institutions concentrate on doing what they do best. If institutions can agree to cooperate by limiting their competition, then the greatest efficiency can be achieved.

Leadership

Consortia and other forms of interinstitutional relationships provide a structure through which leadership can emerge and be shared at the community and regional level. The leadership may come from one or more institutions, from the cooperative organization, and from the public at large. Where there has been success in cooperation, it is always a result of strong leadership at one or more levels.

What Role Will Cooperation Play in the Future?

Alternative Courses of Action

As institutions of higher education plan the next 15 years (1980-95), a period when there will be a 20 percent decline in traditional college-age youth (*U.S. News and World Report,* May 29, 1979 and *Time,* January 15, 1979), and when income from all sources may become depressed, there are four possible courses of action:

- Survive alone
- Develop substantial voluntary interinstitutional relationships
- Accept publicly mandated systems of coordination
- Terminate operation

Given a preference, most institutionally based leaders would favor the order in which the choices are presented above. It seems more realistic to view the four conditions as representing intervals on a continuum because, in actuality, each institution probably will accept a measure of each condition. That is, a given college probably will: (1) go it alone in certain program areas, (2) cooperate in others, (3) accept those systems that are mandated by legislation, and (4) terminate operations that are not feasible.

Universality of Interdependence

The trend of American colleges and universities to increased levels of interdependence in a variety of forms is part of a larger movement to interreliance that permeates all levels of society. For example, a growing body of literature reflects that public school districts are developing cooperative regional groups across the country (Institute for Responsive Education 1978). In 1978 the chief state school officers and state education agencies in eight southern states formed the Southeastern Regional Consortium "to integrate more effectively the different components of the educational system of the region—from kindergarten through higher education and beyond" (Hayman 1978). At the National Education Association in Washington, a permanent staff position has been established to provide national coordination for regional groupings of school districts.

Inquiries from around the globe and contemporary education literature indicate that interinstitutional cooperation is rapidly becoming an international phenomenon (International Association of Universities 1979; Peisert and Framhein 1978). This movement and

the growing concern for international education per se are evidenced in a special issue of the *Acquainter* (October-November 1979) that lists prominent international education organizations and reports on the United Nations University.

The universal movement to increased levels of interdependence extends far beyond education to the world issues of armaments, currency, energy, environment, pollution, water, food, population, religion, human rights, transportation, communication, and other technologies. The trend is irreversible. The challenge to educators is to cultivate forms of interinstitutional cooperation and coordination that retain humaneness and that are responsive at the local and community levels.

Pragmatic Issue-Related Questions

Some of the more pragmatic issues that warrant priority deliberations are:

- Are there models of viable cooperation and coordination that leave pluralism, freedom of choice, and institutional integrity maximally intact?
- To what extent should institutional autonomy yield to collaboration and centralization for the public good?
- In what ways can collaboration be employed to cope with the pragmatic issues of recruitment, retention, retrenchment, funding, and survival?
- What incentives are needed to encourage institutions to break new ground in sharing curricula and staff to control instructional costs?
- Will institutions collaborate to meet new needs requiring lifelong learning opportunities or international education opportunities?
- How can collaboration best be used to assure quality programming in nontraditional education?

Obstacles to Cooperation

The obstacles to cooperation, numerous and complex, may be described in a variety of ways. The most satisfactory organizational schema that the author has found to accommodate the range of problems is a simplified classification system of four categories: legal, financial, institutional, and individual.

Legal requirements occasionally have hindered but rarely have negated cooperation where there is commitment. Federal tax regulations for nonprofit, tax-exempt organizations, and state statutes on incorporation, on resource exchange (students, staff, monies), and on

public bidding for purchases (group purchasing) are the more common areas that may require special attention. Experience has shown, however, the problems are amenable to solution if institutions are willing to invest the effort.

Financial support for voluntary cooperation from public and private sources has been and continues to be limited. Unfortunately, there is a feeling on the part of some educational leaders that pronouncements are sufficient for cooperation to occur. The benefits of cooperation, like any other worthwhile endeavor, have a relationship to the investment made in the effort. Foundations and federal agencies can provide timely selective funding, but the primary source of support in the future will have to come from the state level if cooperation is to become the accepted practice instead of the exception in the educational community.

Institutional obstacles are best characterized as parochial and occur in many forms: autocracy, autonomy, territoriality, academic freedom, etc. Competition is more natural than cooperation because institutions have a history of independence and are organized, governed, and administered largely to serve status quo interests. Institutions need outside encouragement from funding agencies, legislators, trustees, and community leaders in making the necessary changes to adapt to interdependence.

Individuals often comprise another form of institutional parochialism in a lower common denominator. It may be in the form of a trustee or alumnus who wants to preserve the past, a president who measures success by individual institutional progress, a faculty member who perceives outside activity as posing a security threat, or a consortium administrator or association director who advocates cooperation among member institutions but does not extend the same principle horizontally to a larger community.

Essentially the future success of voluntary cooperation will depend on the capacity of the people involved to change from autocratic styles of governance to shared, participatory forms of government.

Appendix A

Major Contributing Authors to the CIL-Carnegie Study of the Cost-Effectiveness of Cooperative Programs

Cross-Registration: Webster C. Cash, Atlanta University Center, and Franklin L. Courson, New York City

Library and Media Cooperation: Lewis D. Patterson, Council for Inter-institutional Leadership

Student Services: Dean E. Tollefson, Union of Independent Colleges of Art, and Webster C. Cash, Atlanta University Center

Group Purchasing: Robert M. Briber, Hudson-Mohawk Association of Colleges and Universities

Cooperative Non-Traditional Programs: George P. Connick, University of Southern Mains, and Donald A. Johnson Quad-Cities Graduate Study Center

Cooperative Academic Programs: Mary H. Ellis, New Orleans Consortium, Robert L. Burns, West Central Wisconsin Consortium, and John McCune Tri-College University

Cost Analysis Methodology: Thomas O. James, Vice President for Financial Affairs, Birmingham-Southern College; and Chairman, NACUBO Small Colleges Committee

Co-Editors of the CIL Reports: Lewis D. Patterson, CIL, and H. Clayton Ackley, Ackley-Petosa Associates, Union of Independent Colleges of Art.

Appendix B

Listing of Consortia and Their Member Institutions That Participated in the CIL-Carnegie Study of Cost-Effective Cooperative Programs

Associated Colleges of the Twin Cities (ACTC)
Augsburg College, The College of St. Catherine, College of St. Thomas, Hamline University, Macalester College

Atlanta University Center (AUC)
Atlanta University, Clark College, Interdenominational Theological Center, Morehouse College, Morris Brown College, Spelman College

Auraria Higher Education Center (AHEC)
Community College of Denver/Auraria, Metropolitan State College, University of Colorado at Denver

Boston Theological Institute (BTI)
Andover Newton Theological School. Boston College Department of Theology, Boston University School of Theology, Episcopal Divinity School, Gordon-Conwell Theological Seminary, Harvard Divinity School, Holy Cross Greek Orthodox Seminary, St. John's Seminary, Weston School of Theology

Claremont Colleges
Claremont Men's College, Pitzer College, Scripps College

Coast Community College District
Coastline Community College, Huntington Beach Library and Cultural Center

Council of West Suburban Colleges (CWSC)
George Williams College, Illinois Benedictine College, Aurora College, North Central College

Dayton-Miami Valley Consortium (DMVC)
Air Force Institute of Technology, Central State University, Clark Technical College, Educational Opportunities Center, Kettering College of Medical Arts, Sinclair Community College, Southern State College, University of Dayton, United Theological Seminary, Urbana College, Wilberforce University, Wilmington College, Wright State University, Wright-Patterson Air Force Base

Five Colleges, Inc.
Amherst College, Hampshire College, Mount Holyoke College, Smith College, University of Massachusetts at Amherst

Graduate Theological Union (GTU)
American Baptist Seminary of the West, Church Divinity School of the Pacific, Dominican School of Philosophy and Theology, Franciscan School of Theology, Jesuit School of Theology at Berkeley, Pacific Lutheran Theological Seminary, Pacific School of Religion, San Francisco Theological Seminary, Starr King School for the Ministry, Graduate Theological Union, Center for Urban-Black Studies, Center Judaic Studies, Center for

Women and Religion, School of Applied Theology, Center for Ethics and Social Policy, The Berkeley Priory and the Institute for Thomistic and Ecumenical Studies, Center for Hermeneutical Studies (in Hellenistic and Modern Culture), Program for the Study of New Religious Movements in America, Pacific and Asian American Center for Theology and Strategies

Greater Cincinnati Library Consortium (GCLC)
Cincinnati Bible Seminary, Cincinnati Country Day School, Cincinnati Technical College, College of Mt. Saint Joseph, Edgecliff College, Northern Kentucky University, Thomas More College, University of Cincinnati, UC Raymond Walker Branch, Ursuline Academy, Xavier University

Greensboro Regional Consortium (GRC)
Bennett College, Guilford College, Greensboro College

Hudson-Mohawk Association of Colleges and Universities (HMACU)
Albany College of Pharmacy, Albany Medical College, The College of Saint Rose, Hudson Valley Community College, Maria College, Rensselaer Polytechnic Institute, Russell Sage College, Schenectady County Community College, Siena College, Skidmore College, Union College

John Wood Community College (JWCC)
Culver-Stockton College, Gem City College, Hannibal-LaGrange, John Wood Community College, Quincy Beauty Academy, Quincy College, Quincy Technical Schools, Southeastern Community College

Massachusetts Higher Education Consortium (MHEC)
(Forty-one colleges and universities in Massachusetts, including eleven private institutions)

Mid-Coast Community College Services (MCCCS)
University of Maine at Augusta, high school, libraries, vocational-technical institutes, hospitals, museums

New Hampshire College and University Council (NHCUC)
Colby-Sawyer College, Franklin Pierce College, Keene State College, Mount St. Mary College, Nathaniel Hawthorne College, New England College, New Hampshire College, New Hampshire State Library, Notre Dame College, Plymouth State College, Rivier College, St. Anselm's College, University of New Hampshire, UNH Merrimack Valley Branch, UNH School of Continuing Studies

New Orleans Consortium (NOC)
Loyola University, St. Mary's Dominican College, Xavier University of Louisiana

Pittsburgh Council on Higher Education (PCHE)
Carlow College, Carnegie Mellon University, Chatham College, Community College of Allegheny County, Duquesne University, La Roche College, Pittsburgh Theological Seminary, Point Park College, Robert Morris College, University of Pittsburgh

Quad-Cities Graduate Study Center (QCGC)
Augustana College, Iowa State University, Marycrest College, Northern Illinois University, Southern Illinois University, Sangamon State University, University of Illinois, University of Iowa, University of Northern Iowa, Western Illinois University

Rochester Regional Research Library Council (RRRLC)
Colgate Divinity School, College Center of the Finger Lakes, Convalescent Hospital, General Railway Signal, Highland Hospital, Hobart and William Smith Colleges, Kodak Research Library, Lincoln First Bank, Monroe Community College, Monroe Development Center, Nazareth College, Roberts Wesleyan College, Rochester Institute of Technology, Saint John Fisher College, State University of New York at Brockport, SUNY at Geneseo, University of Rochester

Tri-College University (TCU)
Concordia College, Moorhead State University, North Dakota State University

Union of Independent Colleges of Art (UICA)
Atlanta Colleges of Art, California College of Arts and Crafts, Center for Creative Studies-College of Art and Design, Cleveland Institute of Art, Kansas City Art Institute, Maryland Institute College of Art, Minneapolis College of Art and Design, Philadelphia College of Art, School of the Art Institute of Chicago

University Center of Georgia, Inc. (UCG)
Agnes Scott College, Atlanta College of Art, Atlanta Public Library, Atlanta University Center, Columbia Theological Seminary, Emory University, Georgia Institute of Technology, Georgia State University, Ogelthorpe University, University of Georgia

York County Community College Services (YCCCS)
University of Southern Maine, Southern Maine Vocational Technical Institute, high schools, public libraries, hospitals, churches, Nasson College

Appendix C—Annotated Bibliography

All of the annotated references are cited in the general Bibliography following this appendix.

1. The relationships between four community colleges and their respective school districts are examined in *Four Case Studies: Working Partnerships Between Community Colleges and Community Schools* (American Association of Community and Junior Colleges 1977). The 60-page monograph describes and examines exceptionally successful community programs at : (1) Clackamas Community College, Oregon City, Oregon; (2) Iowa Central Community College, Fort Dodge, Iowa; (3) Florida Junior College, Jacksonville, Florida; and (4) Washtenaw Community College, Ann Arbor, Michigan. Topics reviewed include factors leading to cooperation, specification of school and college roles, administration of community programs, and educational and social benefits of cooperation.

2. *AACJC/AVA Joint Study: Cooperation in Vocational Education* (American Association of Community and Junior Colleges and American Vocational Association, 1978) is a 25-page "Executive Summary" of a 314-page study report *Education and Training: A Guide to Interinstitutional Cooperation* (AACJA/AVA 1978). The goal of the USOE-funded project was to locate and describe successful articulation efforts among postsecondary institutions in local communities.

Of 203 community-based programs that were nominated for review, 22 were visited to identify policies and procedures that help or hinder cooperation. Nine locations were judged to be practicing successful articulation when assessed against 10 criteria. Four major barriers to articulation are: (1) competing external expectations of special interest groups; (2) stereotyped perceptions of programs and practices of other institutions; (3) a trend toward providing a common set of educational services; and (4) conflicting educational values. The report offers federal, state, and local recommendations on finance, data systems, vocational education, interinstitutional cooperation, and credentialing.

3. Warren Bennis forecasted in 1968 in "New Patterns of Leadership for Tomorrow's Organization," *Technology Review 70,* that bureaucracy—a pyramided, centralized, functionally specialized, impersonal mechanism—will end in the next 25 to 50 years because the system is out of joint with contemporary realities. In its place will be adaptive, problem-solving systems of diverse specialists, linked together by coordinating executives. A major leadership qualification will be interpersonal competence comparable to substantive competence. Other necessary qualifications will be: knowledge of large complex systems and their dynamics; knowledge of practical theories of intervening and guiding these systems, and integrating individuals and groups; and an ability to use all types of information systems. Collaborative leadership must be developed. Executive constellation means an abandonment of executive leader-

ship responsibility but an enlargement of executive effectiveness through realistic allocation of responsibility.

4. *Costing Collegiate Cooperation: A Report on the Costs and Benefits of Interinstitutional Programs with Consortium Case Studies and Guidelines,* available in an unabridged report of 440 pages or a monograph of 36 pages, reports on a two-year study conducted by the Council for Interinstitutional Leadership and supported by the Carnegie Corporation of New York.

The report presents the most thorough review ever undertaken of consortium cost effectiveness. Thirty-eight cooperative programs located at 25 consortia are presented as case studies and are analyzed for their cost effectiveness. The six categories of cooperative programs include: cross-registration; library and media cooperation; cooperative student services, group purchasing; cooperative nontraditional higher education organizational structures and distance learning systems; and cooperative academic programs.

A concluding section identifies major educational benefits of cooperation beyond cost effectiveness and the appendices include a position paper on cost analysis in higher education and on cost-analysis methodology for cooperative programs.

5. CIL's *1977 Consortium Directory* (1978) includes 115 cooperative arrangements, involving 1,398 institutions, which meet five criteria. Each consortium is a voluntary formal organization, includes two or more member institutions, is multipurpose (more than one program), is administered by a professional director, and requires continuing membership support.

The information on each consortium includes: organizational name, address, telephone number, title and name of the chief administrative officer, listing and location of member institutions, and a narrative on the consortium's history, purposes, programs, and funding.

An index references 66 different types of cooperative programs, e.g., cross-registration or faculty exchange, under four general heading: academic, administrative, community, and student. Indexes also are included on "Consortium Directors" and "Location of Consortium Members."

6. The "Consortium Directory Listing" (1979) is updated continuously as a supplement to the latest Consortium Directory (see above). CIL's current listing of 125 multipurpose consortia represents an overall increase of 10 over the 115 consortia reported in the Eighth Edition of the Directory. The Ninth Edition of the Directory is slated for publication in early 1980.

7. *Interinstitutional Cooperation in Higher Education* (Burnett) is a 126-page paperback report on the proceedings of a national conference in 1960 in Corning, New York. It recaps the history of the consortium movement and the involvement of New York, offers the viewpoints of consortium directors, presidents, a faculty member, and a student on cooperation, and includes a directory of 47 consortia.

8. A "Special Issue: International Education" *Acquainter Newsletter* (October-November 1979) researched by Marilyn Emplaincourt and Walker Bush, provides an up-to-date review of international education developments as they relate to interinstitutional cooperation and to national and international agencies. The newsletter presents alarming statistics about the inadequacy of international education in the United States and contrasts that condition with the

role of America in the world community. The publication also cites current activities of major import, such as the deliberations of the President's Commission on Foreign Languages and International Education, and lists the names, addresses, and telephone numbers of 21 national and international organizations that have a primary concern for international education. Brief reports are included on five consortium programs, three national resource agencies, and the United Nations University.

9. Although the document is ten years old at the time of this writing, *Five College Cooperation: Directions for the Future* (1969) is annotated here because it reports on the most comprehensive and thorough long-range planning process ever undertaken by a consortium. The consortuim administration and three representatives from each of the five institutions met regularly for more than one year to consider: academic programs and complimentarity, course exchange, institutional calendars, supplementary academic activities, coeducation, planning and use of facilities and services, community relations and public service, governance, and economic consequences of cooperation.

Five Colleges, Inc., was then and continues to be a major national leader in the consortium movement.

10. *Resources for Change: A Guide to Projects* is an annual publication, now into the fourth issue, of the Fund for the Improvement of Postsecondary Education, U.S. Department of Education. The 1978-79 issue provides single-page descriptions of 175 projects including names, addresses, and telephone numbers of project directors. Included in the project descriptions are 12 sponsored by consortia, eight sponsored by associations, and 19 sponsored by community-based organizations. At least 50 percent of the other projects have some element of interrelatedness. The organization and indexing of the document enhances its use as a resource on current higher educational developments.

11. *Managing Interinstitutional Change* (1975) by Fritz Grupe, has 12 chapters; Impelling Pressures, Why a Consortium, Cooperation Versus Coordination, Moving Toward Cooperation, The Board of Trustees, The Executive Director, Planning, Managing Consortium Priorities, Administering for Change, Criteria for Successful Cooperative Programs, Financing and Consortia 1985: A Feasible Scenario.

12. "The Costing of A Consortium Project" was prepared by Thomas O. James, who served as a primary advisor to the Council for Interinstitutional Leadership in conducting a Carnegie-supported study of cost-effective cooperation.

In addressing the costing of consortium projects, James asks five questions:

- What is cost analysis?
- What are the basic principles of cost analysis?
- What cost-analysis methods are available for costing consortia projects?
- What are special problems of costing consortia projects?
- What future developments can be expected in costing consortia projects?

In answering the questions, James: (1) reviews revelant literature and the state of the art of cost analysis in higher education; (2) outlines basic principles of cost analysis that are used by the National Association of College and University Business Officers and the National Center for Higher Education Management Systems; and (3) suggests basic analysis methodologies that are

practical and that take into account the problems of comparing data among two or more institutions. James also notes the importance of cooperative educational benefits.

13. Among the 50-plus dissertations over the past 15 years on consortia and interinstitutional relationships, Richard Lancaster's "Interdependency and Conflict in a Consortium for Cooperation in Higher Education: Toward a Theory of Interorganizational Behavior" (1969) stands out as a classic work. The researcher's documentation and analysis of the operational dynamics of one of the nation's leading consortia makes the publication the best consortium case study undertaken to date. Lancaster concluded, contrary to higher education literature, "that the consortium studied was not organized in response to recognized interdependency, but was formed primarly to *create* interdependency." Further, he observed, "conflict was not conceived as dysfunctional but as defining boundaries and generating search behavior."

14. The foreword of this study, edited by Clarence Marsh, and published by the American Council on Education, begins with a quote by the president of the Association of Governing Boards:*

> We are just beginning to awaken to the fact that regionalism as a concept has much significance for us. . . . Many colleges and universities are distributed without much rhyme or reason. They overlap, they duplicate, they compete. . . . Almost every one of these institutions tries to do its work just as though there were no other institutions near it.

The 110-page report *Cooperation and Coordination in Higher Eduaction* was published in April 1938.

15. *Regionalism in American Postsecondary Education: Concepts and Practices* (Martorana and Nespoli, 1978) represents one of the two or three more substantive contributions to the research and literature on interinstitutional relationships that have been published to date. The report of 334 pages provides a thorough treatment of the history and practices of regionalism at the interstate and intrastate level. "Regional arrangements" are distinguished from voluntary consortia in general in that the term was defined to include groups "that are in some way *officially recognized* by one or more authoritative agencies in a state. . . ." (page 3). Consequently, several consortia that are state sanctioned but function voluntarily were included in the 98 case-study analyses.

A major portion of the study findings is devoted to the current state of development of regionalization. It was found that 35 of the 50 states report serious attention being given to the concept of regionalism as an aspect of long-range planning and coordination of postsecondary resources. The document is a must for any library on cooperation and coordination.

16. *Study, Talk, and Action: A Report of a National Conference on Regionalism and Regionalization in American Postsecondary Education* (September 1978) by Martorana and Nespoli followed the conclusion of a two-year national study of regionalism (Martorana and Nespoli, June 1978). The volume presents papers from the invitational conference, which was held for two purposes: (1) to disseminate findings, conclusions, and recommendations of the national

*Dr. O. J. Hagen, a physician and a member of the Board of Regents of the University of Minnesota, was president of the "Association of Governing Boards of State Universities and Allied Institutions."

study, and (2) to engage educational leaders from various agencies in a discussion of regionalism and to consider future implications from various perspectives. Topics discussed in relation to regonialism included: coming conditions in academia; state-level policies, planning, budgeting, and governance; leadership; consortia; brokerage; postsecondary education planning commissions; and interstate graduate and professional cooperation.

17. A 193-page feasibility study report, *Midwest Alliance in Nursing* (MAIN September 1979) is annotated because it is indicative of cooperative activity starting to develop nationwide in the allied health field, nursing education, and medical education. The regional study, which began in March 1977 under the sponsorship of the Committee on Institutional Cooperation, culminated in the establishment of MAIN as an ongoing organization effective September 1979. Encompassing a 13-state region, MAIN is

> . . . a unique, member agency organization, comprised of nursing education institutions and health care agencies providing nursing services. Its goal is to facilitate regional investigation, planning, communication, and collaboration with a view toward attaining shared, worthwhile goals and resolving persistent issues and problems. In addition to promoting collaborative endeavors between and among nurses, MAIN will provide a mechanism for promoting region-wide cooperation between and among nurses and other leaders engaged in planning for health care services, facilities and personnel, and in planning, coordinating, and controlling postsecondary education, including nursing education.

18. *Cooperative Arrangements Between Private and Public Colleges* (McKeefery 1978) reports in 28 pages on a study that was sponsored by the American Association of State Colleges and Universities ". . . to document the interdependent nature of the relationship between the two sectors of higher education." Study objectives were to identify different types of cooperative programs, to isolate factors that nurture cooperation, and to counter divisiveness by reinforcing a favorable climate for problem-solving. The document addresses a wide range of topics and issues but is limited in its treatment of each. The report is recommended for general information purposes and for persons wanting a broad overview of public-private cooperation.

19. MacTaggart's draft of *A Syllabus for Determining the Cost Effectiveness of Alternative Experiential Learning Programs* (November 1978) is designed to help students in analyzing, comparing, and evaluating the cost effectiveness of alternative experiential programs. The document supplies few direct answers, but it does provide learning objectives, identifies activities and resources for achieving the objectives, and suggests procedures to evaluate the learning outcomes. The paper is referenced because it is the first and only publication to grapple with comparative cost analyses of alternative experiential education programs. The concepts presented are incomplete but do offer a starting point for future research.

20. *A Guide to Higher Education Consortiums:* 1965-66 (1967) by Raymond Moore is significant because it attempted to inventory the number of "consortia" nationally. The survey, sponsored by the U.S. Office of Education, unfortunately lumped together all types of interinstitutional relationships as "consortia." Misgivings in the field about the purpose and value of the questionnaire survey lead to very incomplete and uncertain findings but the publication

nevertheless called national attention to a widespread movement toward new interinstitutional relationships.

21. The Charles Stewart Mott Foundation *1978 Facts on Grants* is a 512-page report that summarizes 369 projects funded for $10,000 or more in 1978. A very concise "Fact Sheet" format provides vital statistics and information on each project including the amount of funding, contact persons, program purposes, and accomplishments to date. Reference is included here because almost all of the projects are community-oriented and involve partnerships of schools, institutions, education centers, and related public and private agencies. The Foundation makes the book available at no charge.

22. Franklin Patterson's *Colleges in Consort,* published in 1974, stands out in the literature as *the* classic book on interinstitutional cooperation. His analysis of problems facing collaboration in higher education, based on an examination of the history and status of 55 consortia, is both realistic and optimistic. As a former college president, he speaks with authority when he states that the day of pure autonomy of colleges and universities is passed. Patterson concluded the book by making a persuasive case that consortium governing boards should be made independent of the institutions they serve. He urged that government and foundation officials help consortium leaders make cooperation a reality.

23. *Consortia in American Higher Education,* ERIC Report 7 (November 1970, L. Patterson) outlines the history of consortia, the stages of development for a consortium, the purposes and various types of consortia, and funding requirements. The number of general purpose consortia that were established when the publication was released (61 in 1970) has more than doubled (126 in 1979). The major value of the publication at this time is in its selected annotated bibliography of 52 major documents on consortia and interinstitutional relationships.

Bibliography

The ERIC Clearinghouse on Higher Education abstracts and indexes the current literature on higher education for the National Institute of Education's monthly bibliographic journal *Resources in Education (RIE)*. Most of these publications are available through the ERIC Document Reproduction Service (EDRS). Ordering number and price for publications cited in this bibliography that are available from EDRS have been included at the end of each citation. Readers who wish to order a publication should write to the ERIC Document Reproduction Service, Post Office Box 190, Arlington, Virginia 22210. When ordering, please specify the document number. Unless otherwise noted, documents are available in both microfiche (MF) and paper copy (PC).

Aldrich, Howard and Mindlin, Sergio E. "Interorganizational Dependence: A Review of the Concept and Reexamination of the Findings of the Aston Group." *Administrative Science Quarterly* 20 (September 1975): 382-392.

Alford, Robert R. "Research Note: Problems of Data and Measurement in Interorganizational Studies of Hospitals and Clinics." *Administrative Science Quarterly* 20 (June 1975): 485-486.

American Association of Community and Junior Colleges. *Community Colleges, Community Educatoin, Four Case Studies: Working Partnerships Between Community Colleges and Community Schools.* Washington, D.C.: AACJC, March 1977.

American Association of Community and Junior Colleges and American Vocational Association. *AACJC/AVA Joint Study: Cooperation in Vocational Education.* Washington, D.C.: AACJA, 1978.

———. *Education and Training: A Guide to Interinstitutional Cooperation.* Washington, D.C.: AACJA, 1978.

American Association of State Colleges and Universities, and the American Association of Community and Junior Colleges. *Servicemen's Opportunity Colleges '79 Directory.* Washington, D.C.: AASCU and AACJC, 1979.

American Council on Education. *A Study of Cost Analysis in Higher Education.* Volumes I-IV. Washington, D.C.: American Council on Education, 1978.

Anderson, Scarvia B.; Ball, Samuel; Murphy, Richard T., and Associates. *Encyclopedia of Educational Evaluation.* San Francisco: Jossey-Bass, Inc., 1975.

Anderson, Scarvia B. and Ball, Samuel. *The Profession and Practice of Program Evaluation.* San Francisco: Jossey-Bass, Inc., 1978.

Anderson, Wayne W. *Cooperation Within American Higher Education.* Washington, D.C.: Association of American Colleges, 1964.

Association of University Programs in Health Administration. *Program Notes.*

"Special Issue: The Western Network for Education in Health Administration," Number 85, August 1979.

Bennis, Warren G. "New Patterns of Leadership for Tomorrow's Organization." *Technology Review* 70 (April 1968): 36-42.

Benson, J. Kenneth. "The Interorganizational Network as a Political Economy." *Administrative Science Quarterly* 20 (June 1975): 229-248.

Berchin, Arthur. *Toward Increased Efficiency in Community College Courses.* Los Angeles: League for Innovation in the Community College, 1972. ED 063 915. MF-$0.98; PC $17.40.

Black, Donald D. and Cuadra, Carlos A. *Directory of Academic Library Consortia,* Santa Monica, California: System Development Corporation, 1975, pp. 387-418.

Bowen, Howard R. *Investment in Learning: The Individual and Social Value of American Higher Education.* San Francisco: Jossey-Bass, Inc., 1977.

Burnett, Howard J., ed. *Interinstitutional Cooperation in Higher Education: Conference Proceedings Interinstitutional Cooperation.* Corning, New York: College Center of the Finger Lages, 1969.

Carlson, Daryl E.; Farmer, James; and Weathersby, George G. *A Framework for Analyzing Postsecondary Education Financing Policies.* A Staff Report. Washington, D.C.: The National Commission on the Financing of Postsecondary Education, May 1974. ED 093 207. MF-$0.98; PC-$17.40.

Caruthers, J. Kent, and Orwig, Melvin. *Budgeting in Higher Education.* AAHE-ERIC/Higher Education Research Report No. 3. Washington, D.C.: American Association for Higher Education, 1979. ED 169 875. MF-$0.98; PC-$9.27.

Center for Research and Development, University of California, Berkeley. *An Evaluative Look at Nontraditional Education.* Washington, D.C.: National Institute of Education, September 1979. HE 011 912 (Apr 1980 RIE). MF-$0.98; PC-$14.08.

Cherrington, B E. "Cost Analysis in Academic Decision Making." *Educational Record* 60 (Spring 1979): 185-196.

College Center of the Finger Lakes. *Interinstitutional Cooperative Arrangements in Higher Education in New York State.* A report prepared for the Office of Administrative Services in Higher Education. Albany, New York: New York State Education Department, 1970. ED 054 718. MF-$0.98; PC-$10.77.

Connors, M. Austin, Jr.; Diener, Thomas J.; Patterson, Lewis D.; Johnson, Howard W.; McCrummen, Norman. "Guide to Interinstitutional Arrangements: Voluntary and Statutory." Washington, D.C.: American Association for Higher Education, 1974.

Council for Financial Aid to Education, Inc. *Interface: Growing Initiatives Between the Corporation and the Campus Toward Greater Mutual Understanding.* New York City: CFAE, 1977, p. 55.

Council for Interinstitutional Leadership. *Costing Collegiate Cooperation: A Report on the Costs and Benefits of Interinstitutional Programs with Consortium Case Studies and Guidelines.* University, Alabama: CIL, October 1979. Unabridged Report, 440 pages. HE 017 240. MF-$0.98; PC-$24.02. (May 1980 RIE); Monograph, 36 pages. HE 012 073. MF-$0.98; PC-$4.46 (May 1980 RIE).

Council for the Advancement of Experiential Learning, *1978-1979 Directory of Members.* Columbia, Maryland: CAEL, 1979, p. 1.

EDUCOM (Interuniversity Communications Council) *EDUCOM Bulletin*, "Edunet News" (Summer 1979): 1.

Emery, James C., ed. *The Reality of National Computer Networking for Higher Education: Proceedings of the 1978 EDUCOM Fall Conference*. Princeton, N. J.: EDUCOM Series in Computing and Telecommunications in Higher Education No. 3, 1979.

Emplaincourt, Marilyn and Bush, Walker, ed. "Special Issue: International Education." *Acquainter* (October-November 1979). University, Alabama: Council for Interinstitutional Leadership, 1979. HE 012 080. MF-$0.98; PC-$2.99 (May 1980 RIE).

Five College Long-Range Planning Committee. *Five College Corporation: Direction for the Future*. Amherst, Massachusetts: Five Colleges, Inc., 1969.

Fund for the Improvement of Postsecondary Education. *Resources for Change A Guide to Projects 1978-79*. Washington, D.C.: U.S. Department of Health, Education, and Welfare, Education Division, 1979. ED 163 854. MF-$0.98; PC-$15.58.

Gamso, Gary. *An Approach to Cost Studies in Small Colleges*. Boulder, Colorado: National Center for Educational Management Systems, 1978. ED 163 867. MF-$0.98; PC-$7.77.

Gilder, Jamison. "Society for College and University Planning." *AACJC Lifelong Learning Project Report*, July 8-11. 1979.

Grant, Donald L., "Monitoring Ongoing Programs." *New Directions for Program Evaluation Number 3*, 1978. San Francisco: Jossey-Bass, Inc., 1978.

Greenberger, Martin; Aronofsky, Julius; McKenney, James L.; and Massy, William F., ed. *Networks and Disciplines: Proceedings of the EDUCOM Fall Conference*. October 11, 12, 1973. Princeton, N. J.: EDUCOM, Inc., 1973. ED 073 696. MF-$0.98; PC-$15.58.

Grupe, Fritz H. *Managing Interinstitutional Change*. Potsdam, N. Y.: Associated Colleges of the St. Lawrence Valley, 1975.

Hamilton, Beth A., *Multitype Library Cooperation*, R.R. Bowker, Company, New York City, 1977.

Hansen, W. Lee and Weisbrod, Burton A. *Benefits, Costs, and Finance of Public Higher Education*. Chicago, Ill.: Markham Publishing Company, m.d.

Hefferlin, JB Lon and Phillips, Ellis L., Jr. *Information Services for Academic Administration*. San Francisco: Jossey-Bass, Inc., 1971.

Hyman, John. "The Grass Roots Think Tank: A Method of Promoting Future-Oriented Thinking Throughout the Educational System," Montgomery, Alabama: Southeastern Regional Consortium Planning Project, 1978. Mimeographed.

Institute for Responsive Education. *Resource Guide and Bibliography on School Councils*. Boston, Mass.: IRE, 1978.

———. *Sharing the Power? A Report on the Status of School Councils in the 1970s*. Boston, Mass.: IRE, 1977.

International Association of Universities. *Bulletin* 27 (February 1979).

James, Thomas O'Connor. "The Costing of A Consortium Project." *Business Officer*. Washington, D.C.: National Association of College and University Business Officers, June 1979, pp. 26-28.

Keeton, Morris. "Conversations from Wingspread." A taped program. Racine, Wisconsin: The Johnson Foundation, 1979.

Kilgour, Frederick G., "OCLC Grows Up," *American Libraries* (June 1979).

Lancaster, Richard B. "Interdependency and Conflict in a Consortium for Cooperation in Higher Education: Toward a Theory of Interorganizational Behavior." Ann Arbor: University of Michigan, 1969. Unpublished Ph.D. dissertation.

Lenning, Oscar T. *The "Benefits Crisis" in Higher Education.* ERIC/Higher Education Research Report No. 1, 1974. Washington, D.C.: American Association for Higher Education. ED 090 888. MF-$0.98; PC-$5.96.

Lincoln, James R., and Miller, Jon. "Work and Friendship Ties in Organizations: A Comparative Analysis of Relational Networks." *Administrative Science Quarterly* 24 (June 1979): 181-199.

MacTaggart, Terrence. "A Syllabus for I. Determining the Cost Effectiveness of Alternative Experiential Learning Programs, and II. Developing a Model for Student Choice Among Education Options." Fairbanks: University of Alaska, November 1978.

Marsh, Clarence S., ed. *Cooperation and Coordination in Higher Education,* Washington, D.C.: American Council on Education, April 1938.

Martorana, S.V. and Nespoli, Lawrence A. *Regionalism in American Postsecondary Education: Concepts and Practices.* University Park: Center for the Study of Higher Education, The Pennsylvania State University, June 1978. ED 156 103. MF-$0.98; PC-$23.71.

———. *Study, Talk, and Action: A Report of a National Conference on Regionalism and Regionalization* in American Postsecondary Education. University Park: Center for the Study of Higher Education, The Pennsylvania State University, September 1978. ED 165 602. MF-$0.98; PC-$9.59.

McKeefery, William J. *Cooperative Arrangements Between Private and Public Colleges.* Wayne, N. J.: William Patterson College of New Jersey, 1978.

Minter, W. John. "Current Economic Trends in American Higher Education." *Change* (February 1979): 19-25.

Moore, Raymond. *Consortiums in American Higher Education 1965-66: Report of an Exploratory Study.* Washington, D.C.: D.H.E.W., Office of Education, 1968. ED 051 728. MF-$0.98; PC-$5.96.

———. *A Guide to Higher Education Consortiums: 1965-66.* Washington, D.C.: D.H.E.W. 1967.

Mortimer, Kenneth P., and Tierney, Michael L. *The Three "R's" of the Eighties: Reduction, Reallocation and Retrenchment,* AAHE-ERIC/Higher Education Research Report No. 4. Washington, D.C.: American Association for Higher Education, 1979. ED 172 642. MF-$0.98; PC-$7.77.

Mott Foundation, The Charles Stewart. *1978 Facts on Grants.* Flint. Michigan: Mott Foundation, 1978.

Nash, Nicholas and Culbertson, Jack, ed. *Linking Processes in Educational Improvement: Concepts & Applications.* Columbus, Ohio: University Council for Educational Administration, 1977. ED 141 897. MF-$0.98; PC-$23.71.

National Association of College and University Business Officers. *College and University Business Administration.* Washington, D.C.: NACUBO, 1975. Chapter 4:5, pp. 15-16.

National Association of College and University Business Officers, and National Center for Higher Education Management Systems. *Procedures for Determining Historical Full Costs: The Costing Component of NCHEMS Information Exchange Procedures,* Technical Report 65, Second Edition. Washington, D.C.: NACUBO, September 1977. ED 145 771. MF-$0.98; PC-$18.90.

National Center for Educational Brokering. *1979 Directory: Educational and Career Information Services for Adults.* Washington, D.C.: NCEB, January 1979.

Nowak, Phillip, and Pfeffer, Jeffrey. "Joint Venture and Interorganizational Interdependence." *Administrative Science Quarterly* 21 (September 1976): 398-399.

Patrick, Ruth J. *Guidelines for Library Cooperation: Development of Academic Library Consortia.* Santa Monica, California.: System Development Corporation, 1972, p. 2.

Patterson, Franklin. *Colleges in Consort.* San Francisco, California: Jossey-Bass, Inc., 1974.

Patterson, Lewis D. *Consortia in American Higher Education.* Report 7. Washington, D.C.: ERIC Clearinghouse on Higher Education, 1970. ED 043 800. MF-$0.98; PC-$2.96.

———. "Consortium Directory Listing" University, Alabama: Council for Interinstitutional Leadership, 1979.

———, and Burns, Robert L. *1977 Consortium Directory.* Eighth Edition. University, Alabama: Council for Interinstitutional Leadership, 1978. ED 143 299. MF-$0.98; PC-$10.77.

Perkins, James A., ed. *Higher Education: From Autonomy to Systems.* New York City: International Council for Educational Development, June 1972.

Peisert, Hansgert, and Gerhild, Framhein. *Systems of Higher Education: Federal Republic of Germany.* New York City: International Council for Educational Development, 1978, foreword.

Renon, Alberto Gutierrez. "Problems of Decentralizing Educational Administration." *Prospects* 7 (1977): 82-85.

Rosenweig, Robert M. "An End to Autonomy: Who Pulls the Strings?" *Change* (March 1978): 28-29, 62.

Schlotfeldt, Rozella M. *Midwest Alliance in Nursing: Feasibility Study.* Indianapolis, Ind.: Midwest Alliance in Nursing, Sept. 1979.

Scott, Robert A. "Beleaguered Yeomen: Comments on the Condition of Collegiate Middle-Managers." *College and University* 54 (Winter 1979): 89-95.

Scully, Malcolm, G. "Language Panel to Urge Carter to Create International Centers." *The Chronicle of Higher Education,* Sept. 17, 1979, p. 13.

Seaman, A. Frederick, Jr. "What Systems Professionals Ought to be Doing." *College and University* 55 (Fall 1979): 5-12.

Shannon, William G.; Martorana, S.V.; and Wollitzer, Peter A. *International Understanding: A Framework for Community College and University Cooperation in Institutional Development.* University Park: Center for the Study of Higher Education, The Pennsylvania State University, November 1977. ED 149 816. MF-$0.98; PC-$4.46.

Sprunger, Benjamin E. and Bergquist, William. *Handbook for College Administration.* Washington, D.C.: Council for the Adancement of Small Colleges, 1978. ED 163 850. MF-$0.98; PC-not available from EDRS.

Steers, Richard M. "Problems in the Measurement of Organizational Effectiveness." *Administrative Science Quarterly* 20 (December 1975): 546-558.

Stern, Robert N. "The Development of an Interorganizational Control Network: The lase of Intercollegiate Athletics'. *Administrative Science Quarterly* 24 (June 1979): 242-265.

Tollefson, Dean E. "P2E IB F4Z: Identifiers for 21st Century Learning Com-

munities." Paper presented at the Annual Conference of the American Council on Education, November 1, 1979, in Houston, Texas. Mimeographed.
Warford, Ann Ritter. *Handbook for Communtiy College/Community School Cooperative Relationships: A Case Study of Cooperation in Clackamas County, Oregon,* July 1978. ED 169 960. MF-$0.98; PC-$7.77.

Already Published in the 1979 Series

1. Women in Academe: Steps to Greater Equality — $4.00
   Judith Gappa and Barbara Uehling

2. Old Expectations, New Realities: The Academic Profession Revisited — $4.00
   Carol Herrnstadt Shulman

3. Budgeting in Higher Education — $4.00
   J. Kent Caruthers and Melvin Orwig

4. The Three "R's" of the Eighties: Reduction, Retrenchment, and Reallocation — $4.00
   Kenneth P. Mortimer and Michael L. Tierney

5. Occupational Programs in Four-Year Colleges: Trends and Issues — $4.00
   Dale F. Campbell and Andrew S. Korim

6. Evaluation and Development of Administrators — $4.00
   Robert C. Nordvall

7. Academic Advising: Getting Us Through the Eighties — $4.00
   Thomas J. Grites

8. Professional Evaluation in the Eighties: Challenges and Response — $4.00
   Glenn F. Nyre and Kathryn C. Reilly

9. Adult Baccalaureate Programs — $4.00
   Marilou Denbo Eldred and Catherine Marienau

To subscribe to the Research Report series (10 issues starting from date of subscription), write to the Publications Department, American Association for Higher Education, One Dupont Circle, Suite 780, Washington, D.C. 20036. The subscription rate for AAHE members is $25, for nonmembers $35. Payment must accompany all orders under $15.